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ABSTRACT

Designed for teachers and counselors, this professional manual provides detailed information for utilizing access materials and setting up the Career Information System (CIS) component of the Career Decision-Making (CDM) program developed by Appalachia Educational Laboratory. (See CE 019 229 for a description of the total CDM program.) The first section of this manual provides an overview of the CIS component. The second section contains detailed instructions for installing and maintaining the CIS in a variety of settings. (A companion document, CE 019 234, contains a file content notebook utilized in the installation of the CIS component.) This section also contains three attachments: materials and equipment list; career area-worker trait group list; and worker trait group index to commercial briefs. Finally, the third section provides utilization guides for the following CIS materials: (1) Individualized Activities for Career Exploration; (2) Work Activities Checklist; (3) Work Situations Checklist; (4) Aptitudes Checklist (CE 019 235); (5) School Subject-Worker Trait Group Chart and School Subject-Occupation Index (CE 019 240); and (6) Worker Trait Group Keysort Deck (CE 019 236). (BM)

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David Winefordner

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

CE 019 233

CAREER INFORMATION SYSTEM
PROFESSIONAL MANUAL

David W. Winefordner, Director
Career Decision-Making Program
Appalachia Educational Laboratory, Inc.

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FOREWORD

Information is a critical element in making decisions. For career related decisions, the information must encompass multiple perspectives, come from many sources, and be easily accessible and retrievable. The Appalachia Educational Laboratory, in developing the **Career Information System** (CIS), has built a comprehensive organization and management system for career information resources. The CIS allows students to explore themselves in relation to the world of work. By using the Worker Trait Group approach, based upon the **Dictionary of Occupational Titles,** Fourth Edition, published by the U.S. Department of Labor, multiple inputs can be used to explore work and leisure situations and relate these to high school course selection and to career choices.

The **Career Information System** goes beyond organizing multiple resources about occupations, by incorporating information on experiential learning, community resources, education, training, and placement which are critical for informed career planning. As an open-ended system with unlimited growth potential and considerable flexibility, it is a unique curriculum tool for career exploration. Although the **Career Information System** is a manual system, its components can be easily adapted to a computer mode of storage and retrieval. The use of the CIS is not limited to secondary school students. It can be used by any age group in almost any setting.

The Appalachia Educational Laboratory has orchestrated a unique working relationship with the National Institute of Education, the U.S. Department of Labor, educational representatives from regional, state, and local levels, and the McKnight Publishing Company which is culminated by the publication of the **Career Information System.** The system is a component of the **Career Decision-Making Program** developed by the Appalachia Educational Laboratory. The **Career Information System** can be a hub around which the other components of the **Career Decision-Making Program** and a school's broader educational program can revolve. The CIS is a system which facilitates the teaching of career exploration, career decision-making, and career planning to secondary school students. The potential of this system is unlimited. The **Career Information System** will be an important addition to the educational programs in our schools.

Corinne H. Rieder

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Associate Director
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National Institute of Education

PREFACE

There has been an increasing emphasis placed upon the organization of career information resources. Many schools have set up career resource centers or have identified a specific space in which to place available resources. Organizing the resources into one location facilitates their use. Although this physical organization is important, career information resources must be organized so that occupational information is linked to the access variables, such as interests and aptitudes, used to help students develop an understanding of self. In addition, they need to be organized so that all resources relating to each occupation may be easily identified. This **Career Information System** (CIS) is an organizational structure for facilitating career exploration.

The CIS is based upon the Worker Trait Group structure of the **Dictionary of Occupational Titles,** 4th Edition. Career information resources and access variables are both indexed to their related Worker Trait Groups. Thus, the Worker Trait Groups provide a system for linking access variables and career information resources.

The **Career Information System** also links the access variables and career information resources to curriculum opportunities. This linkage facilitates students' identification of courses they might take for occupational exploration or skill development. In addition, the linking of courses to occupational information facilitates teachers' utilization of resources as part of course experiences. This can help students see the relevance of education to their future role as workers.

The **Career Information System** is an open-ended system. It provides a structure with potential for moving from the typical print/audiovisual occupational information, which makes up most of the resources included in present systems, to including experiential information, education and training programs available, and job opportunities. As components of students' occupational exploration, opportunities for education, training, and employment need to be associated with the Worker Trait Groups or occupations being explored to provide the basic information needed for decision-making. Other systems and materials are linked to the **Career Information System** by indexing procedures. Thus, multiple systems are reduced to a single system which eliminates many of the usage problems for students, teachers, and counselors.

This **Career Information System Professional Manual** provides detailed information on setting up the system and utilizing the related access materials. The system can provide the common element unifying the career exploration opportunities of students through guidance, counseling, and instructional services.

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ACKNOWLEDGMENTS AND DEDICATION

The staff of the Division of Career Guidance, Appalachia Educational Laboratory (AEL), wish to express their appreciation to the many individuals who have contributed to the successful development and publication of the **Career Decision-Making Program.** Therefore, this program is dedicated to former staff members, AEL staff, consultants, field test site personnel, students, advisory committees, McKnight Publishing Company staff, and others who have contributed in many ways.

Walter Adams
Mary Bee Antholz
Anna Louise Lucas
John G. Odgers
Martha Stanley
Phyllis Stowers
C. Todd Strohmenger
David W. Winefordner, Director

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INTRODUCTION

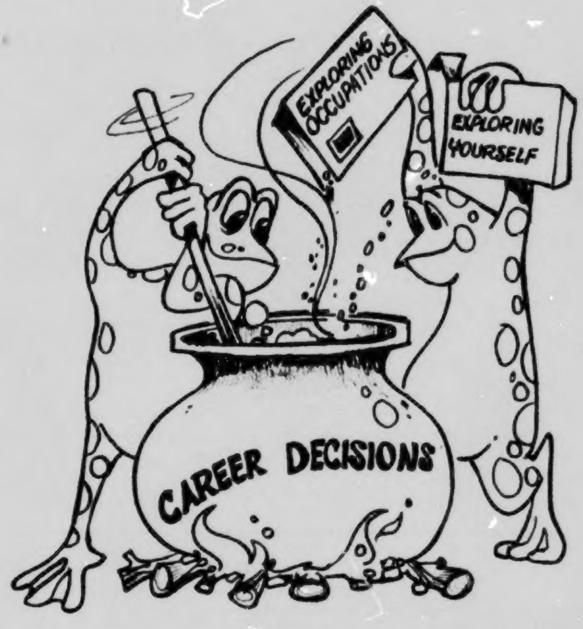
Career exploration requires the integration of two processes: self-exploration and occupational exploration. The information necessary for self-exploration resides in the individual students and their interactions with the world around them. Occupational information, on the other hand, is not so readily obtained. Although there is a wealth of occupational information in varying forms (print, audiovisual, experiential) and directed to varying levels (awareness, orientation, exploration, preparation, placement), it is rarely available for easy and meaningful use.

The **Career Information System** (CIS), a major component of the **Career Decision-Making Program,** developed by the Appalachia Educational Laboratory, provides a structure within which individuals can integrate the processes of self-exploration and occupational exploration. The system can incorporate all forms of occupational information which can be reached through individuals' interests and abilities.

Implementation of the CIS involves two major functions: (1) installation and maintenance, and (2) utilization. The **Career Information System Professional Manual** is designed to guide teachers, counselors, and other professionals in the performance of these functions.

The first section of the manual provides an **overview** of the **Career Information System.** The second section contains **detailed instructions** for installing and maintaining the CIS in a variety of settings. The third section provides utilization guides for the CIS materials.

Perhaps the most important aspect of the CIS is that it is not static and can be used more than once by any individual. The system is designed for easy updating. The access routes to the system's information provide for exploration at varying levels of interest and sophistication. Thus, it is responsive to changes in individuals and the world of work, providing meaningful information to individuals throughout their career development.



CAREER INFORMATION SYSTEM OVERVIEW

One of the most essential elements in any career guidance program is information resources. Without appropriate and adequate resources, students may be limited in their exploration which affects their career decision-making. Therefore, the identification and organization of career information resources are vital to the success of any career guidance program.

It is recognized that it is impossible to build a "total" system containing information about all of the thousands of different occupations. If such information were available, it would be impossible for students to explore all occupations. Therefore, the critical tasks in setting up, maintaining, and expanding career information systems are (1) the identification of information resources representative of employment opportunities and preparation programs, and (2) establishing personalized access strategies.

The **Career Information System** (CIS), developed by the Appalachia Educational Laboratory, addresses three of the following four problem areas encountered by most career information systems: (1) identification of all available resources, (2) organization and management of resources, (3) utilization and access of resources and (4) organization of the activities used to locate information. The CIS does not address the problem of identifying all available resources since this is unique to each school setting or institution.

The **first** step in initiating or evaluating a school's career information system is to analyze the existing resources. Typical resources are occupational briefs from commercial publishers, two or three bound occupational information publications, such as the **Occupational Outlook Handbook** published by the U.S. Department of Labor, and a few audiovisual materials. Although these resources may be considered limited in relation to what is needed, they do form a basic source from which a total system can be developed. In addition to printed and audiovisual resources, a variety of other resources needs to be incorporated into the system. These include education/training, job opportunity/placement, and "experiential" information.

ALL YOU EVER WANTED TO KNOW ABOUT OCCUPATIONS ... BUT WERE AFRAID TO ASK
BRAIN SURGERY self-taught
DEEP SEA DIVING
Barbering
SALES

The **second** step is to organize the career information resources. The physical location of resources represents one dimension of organization. Many schools have established career resource centers or have identified a specific location for housing these resources. A second dimension of organization relates to resource utilization. Resources need to be organized (indexed) so that all resources relevant to each occupation can be easily identified. In addition, the resources need to be organized by a group or clustering structure. This structure must facilitate locating materials on some other basis than occupational titles, namely, the access variables commonly used in most career guidance programs such as interests and aptitudes. Thus, all information resources are identified to occupations and further linked to the system's grouping structure through indexing and filing procedures.

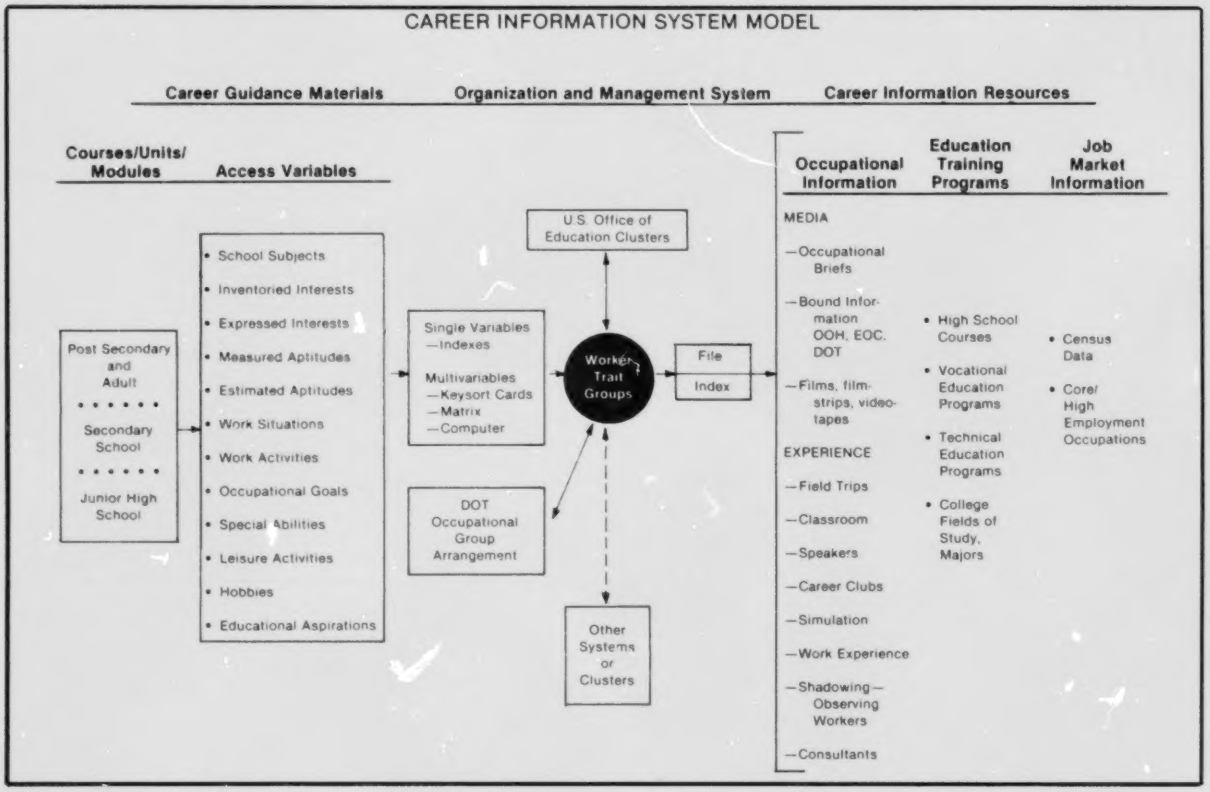
The **third** step is to identify appropriate materials and access variables which can contribute to an individual's understanding of self and the world of work. This understanding can help an individual identify related groups and occupations as well as training and placement information.

The **fourth** step is to develop a program and activities which incorporate the access variables and materials. These access variables and materials provide individualized career exploration experiences for students. However, these materials do not make up a total career guidance program. Other important dimensions, such as goals, values, and decision-making, need to be included to provide the basic knowledge and skills needed for career exploration and decision-making.

Career Information System Model

As the **Career Information System** was being designed, the most crucial decision was the selection of (1) the grouping structure to be used in organizing resources, and (2) the access variables which could be appropriately linked to the groups. There are several types of clustering structures. Some of the most common ways of grouping occupations are by products or services provided, processes or materials used, type of work performed, industry designations, and worker qualifications. Since meaningful career exploration should focus upon the individual, it was decided that the most appropriate clustering system was the one based upon worker qualifications. This clustering structure is one of the occupational classification systems developed by the U.S. Department of Labor and included as part of the **Dictionary of Occupational Titles,** Third Edition, 1965. This system, the Worker Trait Group Arrangement, consists of homogeneous clusters of occupations requiring similar worker characteristics. Access variables such as interests and aptitudes can be appropriately linked to worker characteristics, since they provide a personal dimension to the world of work. Therefore, the Worker Trait Groups were selected as the grouping structure of the **Career Information System.** The Worker Trait Group structure of the **Dictionary of Occupational Titles,** Third Edition, was used to develop and field test the CIS. The Worker Trait Group structure of the **Dictionary of Occupational Titles,** Fourth Edition, was used to revise and publish the CIS.

As a basis for addressing the four problems and the four steps discussed previously, the following conceptual model for the **Career Information System** was designed.


CAREER INFORMATION SYSTEM MODEL
Career Guidance Materials
Organization and Management System
Career Information Resources
Courses/Units/ Modules
Access Variables
Post Secondary and Adult
Secondary School
Junior High School
School Subjects
Inventoried Interests
Expressed Interests
Measured Aptitudes
Estimated Aptitudes
Work Situations
Work Activities
Occupational Goals
Special Abilities
Leisure Activities
Hobbies
Educational Aspirations
Single Variables —Indexes
Multivariables —Keysort Cards —Matrix —Computer
U.S. Office of Education Clusters
Worker Trait Groups
DOT Occupational Group Arrangement
Other Systems or Clusters
File
Index
Occupational Information
Education Training Programs
Job Market Information
MEDIA
—Occupational Briefs
—Bound Information OOH, EOC, DOT
—Films, filmstrips, videotapes
EXPERIENCE
—Field Trips
—Classroom
—Speakers
—Career Clubs
—Simulation
—Work Experience
—Shadowing—Observing Workers
—Consultants
High School Courses
Vocational Education Programs
Technical Education Programs
College Fields of Study, Majors
Census Data
Core/ High Employment Occupations

In the right-hand column of the model, under the heading "Career Information Resources," three types of information are identified with illustrations of materials or information. Each of these resources may be related to a specific occupation or to a Worker Trait Group. As these resources are identified and included in the CIS, an emphasis should be placed upon **local** opportunities and information. State, regional, and national information also needs to be included because of the high degree of mobility of the population. A priority should be placed upon including information related to the degree of opportunity. A "core" set of occupations has been identified and included in selected guides and indexes of the **Career Information System.** This set of occupations includes the major national employment opportunties as well as those occupations found in common career information resources.

In the middle column of the model, under the heading "Organization and Management System," note that the Worker Trait Groups label is shown in a circle and in the center of the column. This circle symbolizes the Worker Trait Groups as the "hub" of the system. All career information resources that can be linked with an occupation or a Worker Trait Group are placed into the CIS through filing and/or indexing procedures. In addition to career information resources, other systems or occupational clusters may be linked to the Worker Trait Groups through indexing procedures. Thus, the Worker Trait Groups form a common grouping structure to which all resources are linked and other systems can be tied.

In the left-hand column of the model, under the heading "Career Guidance Materials," is a listing of some of the common access variables used in school guidance programs to help students develop an understanding of self and the world of work. A general problem with existing access materials is that they are tied to different grouping structures of the world of work, i.e., an interest inventory tied to one set of occupational scales and an aptitude test reporting scores related to other clusters. In the **Career Information System,** all access variable elements are indexed to the related Worker Trait Groups to eliminate this problem. For example, mathematics, as an element of the school subject variable, is linked to Worker Trait Groups utilizing mathematical knowledge and skills. The worker characteristics associated with the Worker Trait Groups have been used to develop CIS access materials.

The box located to the left of the Worker Trait Group "hub" in the middle column of the model contains a listing of techniques that can be used to link Worker Trait Groups to one or more variables. Single elements of a variable can be linked to the Worker Trait Groups through an indexing procedure. An index has been developed for each of these access variables included in the **Career Information System**. Two of the three techniques listed to link Worker Trait Groups to multivariables are manual techniques. The **Career Information System** was developed as a manual system to eliminate high costs and limited availability of computers. Although the computer system was not developed, the CIS manual system may be easily adapted to computerization.

As part of the career guidance materials, units and modules have been developed for each of the CIS access variables. The module and unit materials include sound filmstrips to present basic concepts related to each access variable and activities to provide students with an opportunity to relate experiences to occupational exploration. In addition to the units and modules, a semester course encompassing 15 curriculum units has been developed for secondary school use.

Although the initial CIS materials were developed for use at the secondary school level, they may also be used with adults and post secondary students.

Planning the System Installation

One of the most important aspects of implementing the **Career Information System** is preplanning. The model may be used to evaluate present resources, guidance materials, and system structure.

The primary installation decision that needs to be made relates to the organization of the career information resources. If the grouping structure in the school's system is being effectively used with guidance or curriculum activities or materials, the decision may be made to keep that structure and link the Worker Trait Group structure of the **Career Information System** through an indexing procedure. The section entitled "Career Information System File Plan" of this manual contains step-by-step instructions on how to adapt the CIS to other filing systems. Adapting the Worker Trait Group structure of the **Career Information System** to an existing system permits the best of both systems to be utilized, thus increasing the overall system's effectiveness.

Another major decision relates to the amount of access variables and related career guidance materials to be used. If most of these materials and access variables are planned to be used with any one group of students, then the **Exploring Career Decision-Making** text, used as a semester course meeting five periods a week, should be considered. This book is available from McKnight Publishing Company. If the time available is limited and planned activities are more related to exploratory experiences, then the **Individualized Activities for Career Exploration** (IACE) booklet which is designed for a five- to nine-week session should be considered. Other CIS materials, through a unit/module design, may be used independently on a short-term basis. The IACE booklet and the other CIS materials are also available from McKnight Publishing Company.

As part of the preplanning, the user should become familiar with all of the CIS materials and decide which materials best meet the time and activity requirements. Pilot activities conducted with a few students should be considered to acquaint the teacher/counselor with the materials and process as well as to test the system's operation.

The location of the **Career Information System** should also be considered in preplanning. If possible, space should be provided to place all career information resources into one location. Consider a spacious location near student traffic patterns to provide easy access and use for students. The Career Resource Center approach should be considered. If possible, the CIS materials should be near the counseling offices and near facilities where audiovisual materials can be shown and group guidance activities conducted.

Personnel decisions also need to be made. The responsibility of the **Career Information System** must be assigned to one staff member. Effective installation, operation, maintenance, and expansion of the system are dependent upon career resource information being considered as a vital part of the school's career guidance and curriculum programs. Without this recognition and responsibility assignment, the CIS cannot reach its potential.

A planning committee comprised of members from the administration, faculty, and student body may be formed to help develop the planning of the **Career Information System's** installation and utilization. This committee could serve two purposes — (1) provide input on how the CIS can best meet the needs of curriculum and guidance and (2) provide an avenue of communication back to the groups represented by the committee members. After the installation of the CIS, the committee might be terminated or kept as an advisory committee for the operation and expansion of the CIS.

Setting Up the System

Rather than starting on a large scale and setting up the total system, it is recommended to install the basic system first. The basic system includes unbound occupational briefs stored in vertical files and bound occupational information references such as the **Occupation Outlook Handbook** published by the U.S. Department of Labor, and the **Encyclopedia of Careers,** published by Ferguson Publishing Company, which have already been indexed to the Worker Trait Groups. The basic system can be used to pilot activities for familiarizing students and staff with the systems structure and operation.

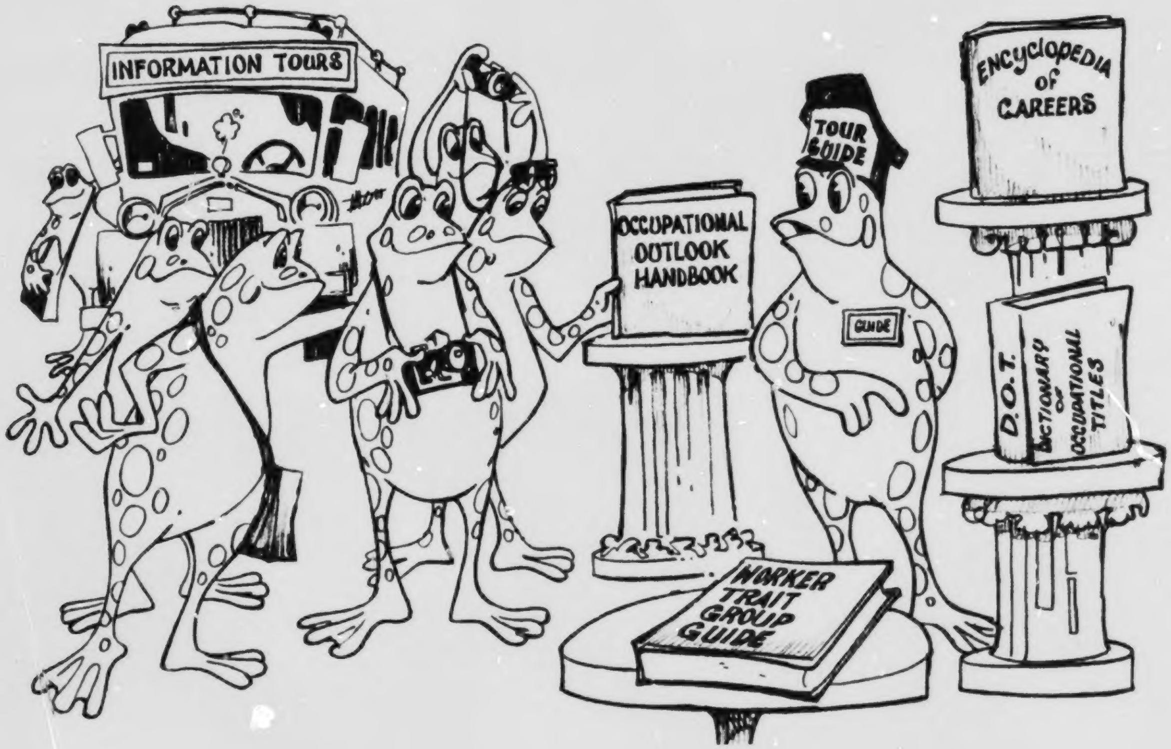
Once this basic system is set up, it may be expanded to include the other resources such as books and audiovisual materials. Then, it may be expanded further to include the experiential information resources found in the school and community. Without these experiential resources, the **Career Information System** is limited.

The initial work in setting up the basic system requires personnel time for coding, setting up files, recording, and cataloging. This clerical function may be performed by interested students, a business education class, or other student body service groups.

The section entitled "Career Information System File Plan" of this manual contains detailed instructions on how to set up the system.

Using The System

One of the major strengths of the **Career Information System** is its utility for providing access to career information in a variety of ways which facilitate personalized career exploration. Awareness and understanding of personal qualities such as aptitudes, vocational interests, leisure time activities, hobbies, and preferences for a variety of things including school subjects are critical elements in career exploration. These personal characteristics, when linked to the world of work through Worker Trait Groups, provide a means of career exploration.



The CIS has been designed for use with different groups and in a variety of settings. The section entitled "Career Information System Utilization Guides" of this manual contains detailed instructions on the use of the CIS materials in a group guidance setting. Independent learning stations within the facility housing the **Career Information System** may be established for individual use. The CIS materials are set up so that students may locate and use them with minimal assistance. However, a staff member needs to schedule the use of experiential resources.

Summary

As your school, local, state, and federal agencies, and curriculum developmental groups develop new access materials, these should be integrated into the Career Information System File Plan and Utilization Guides. The flexibility provided by the notebook format of the **Career Information System Professional Manual** facilitates the physical integration of new materials. The CIS has been developed as an open-ended system to allow the addition of such new access materials.

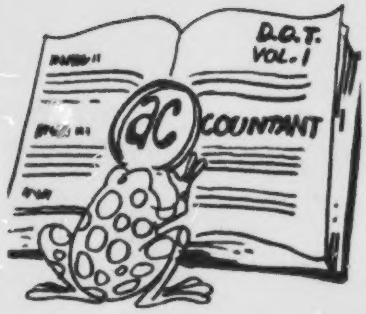
13

CAREER

INFORMATION

SYSTEM

FILE PLAN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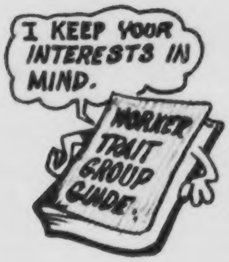

I KEEP YOUR INTERESTS IN MIND.
WORKER TRAIT GROUP GUIDE

INTRODUCTION

The Career Information System File Plan is a description of the CIS organization and management procedures. The 12 Career Areas and GG Worker Trait Groups (WTG) used to organize and index career information resources in the CIS are based upon the Area - Group structure of the **Dictionary of Occupational Titles** (DOT), Fourth Edition.

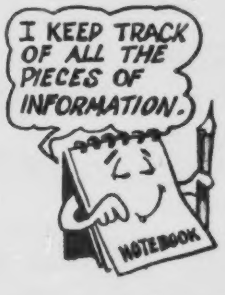
Procedures are given in this File Plan for installing, operating, and maintaining the CIS. These procedures are described and illustrated in detail. Installation of the CIS is divided into two segments. The first stage is the development of the basic system. The basic system is designed for organizing unbound materials containing information about a single occupation. In addition, the basic system also contains Worker Trait Group indexes to two common occupational references, the **Occupational Outlook Handbook** and the **Encyclopedia of Careers.**

The second stage of the CIS development involves adding other career information resources such as books and audiovisual materials, as well as experience resources. The expansion of the CIS is tailored to fit the resources available to a school.

In addition, this File Plan contains procedures for adapting existing filing systems to the Worker Trait Group structure. These procedures are designed to permit other filing systems already in operation to continue, but be adapted to the CIS through indexing to the Worker Trait Groups.

Most of the materials needed to install the CIS are furnished as part of the CIS package published by McKnight Publishing Company. Additional materials needed are listed in the procedures as well as in Attachment A of this manual. Those materials which must be obtained from another source are indicated by an **asterisk.**

TASKS
salary
DUTIES


I KEEP TRACK OF ALL THE PIECES OF INFORMATION.
NOTEBOOK

WE CAN HELP!
OCCUPATIONAL OUTLOOK HANDBOOK
ENCYCLOPEDIA OF CAREERS

INSTALLING THE BASIC SYSTEM

The Worker Trait Group (WTG) filing and indexing system is designed to accommodate a wide range of career information resources. However, initial installation of this system focuses on developing a basic system which is designed to accommodate single-job unbound materials. These materials, such as briefs and pamphlets, are assigned to one Worker Trait Group and filed accordingly. Other types of career information resources cannot be physically filed or contain occupational descriptions for more than one Worker Trait Group. These types of resources are used to expand the system once it has been established.

The basic system is composed of three physical components and uses four procedures for processing single-job unbound materials.

Physical Components	**Processing Procedures**
• **File Content Notebook**	• Coding
• Alphabetical Card File	• Recording
• WTG Vertical File	• Cataloging
	• Filing

Preparing the Physical Components

File Content Notebook

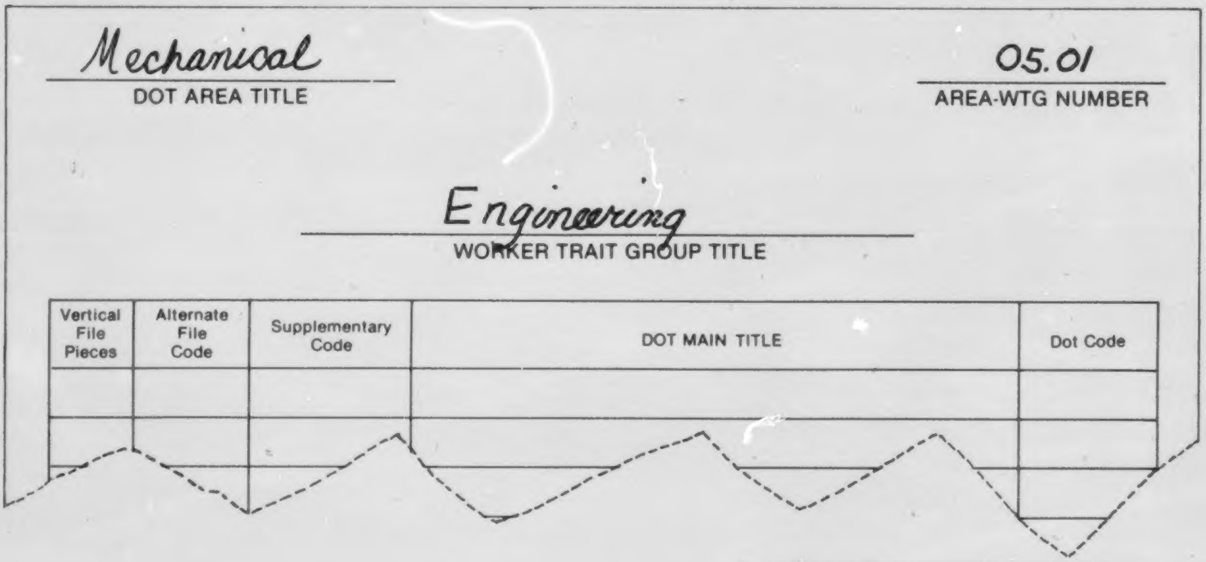
The **File Content Notebook** is a looseleaf notebook. It is used as a Worker Trait Group index to all DOT Main Titles of materials stored in the WTG Vertical File. The notebook has a divider for each of the 12 Career Areas and 66 Worker Trait Groups. As materials are processed into the system, the DOT Main Titles are entered on preprinted forms behind the appropriate WTG divider. A tally mark is made to show how many pieces of information are in the file for a particular DOT Main Title.

Materials provided for setting up the **File Content Notebook** are:

- Three-ring notebook
- 12 dividers for Career Areas
- 66 dividers for Worker Trait Groups
- Printed notebook forms
- Area — Worker Trait Group List (Attachment B of this manual)

The **File Content Notebook** is developed by using the following procedures:

1. Prepare a notebook form for each of the 66 Worker Trait Groups, obtaining the necessary information from the Area — Worker Trait Group List (Attachment B of this manual). Fill out the appropriate blanks on the top margin of the form as shown in the following illustration.



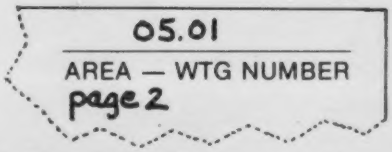
Mechanical
DOT AREA TITLE

05.01
AREA-WTG NUMBER

Engineering
WORKER TRAIT GROUP TITLE

Vertical File Pieces	Alternate File Code	Supplementary Code	DOT MAIN TITLE	Dot Code

When a WTG form has been completely filled with job title entries, an additional form should be prepared. The additional forms should have a page number designation placed under the Area — WTG number as in the following example:



05.01
AREA — WTG NUMBER
page 2

2. Insert the prepared forms behind the appropriate Area — WTG dividers.

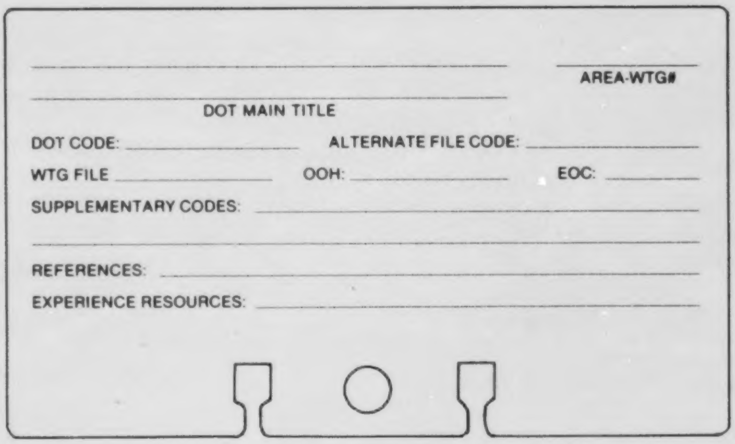
Alphabetical Card File

The Alphabetical Card File is an index for all occupational titles processed into the system. It has two types of entry cards: DOT Main Title cards and Alternate Title cards.

Materials used to develop the Alphabetical Card File are:

- *Card File (standard or rotary)
- *Alphabetic Divisions
- Cards (3" × 5")
  - — preprinted Main Title cards
  - — *blank Alternate Title cards

Preprinted cards are used for the DOT Main Titles. These are the primary entry cards used to designate the Worker Trait Group to which a DOT Main Title belongs. In addition, they show other pertinent information, as illustrated in the following sample.



AREA-WTG#

DOT MAIN TITLE

DOT CODE: ______ ALTERNATE FILE CODE: ______

WTG FILE ______ OOH: ______ EOC: ______

SUPPLEMENTARY CODES: ______

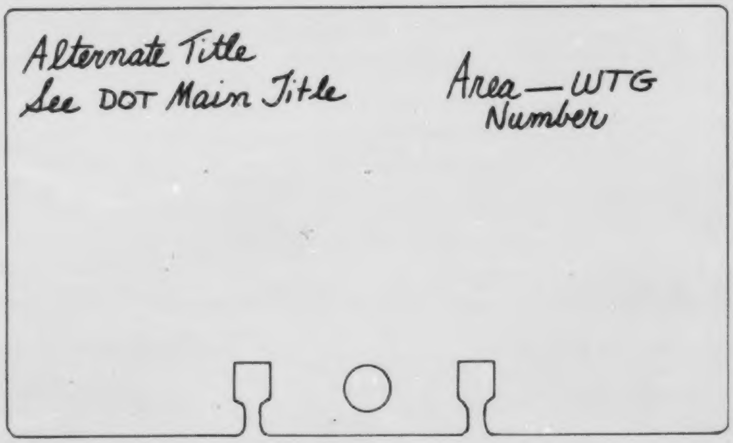
REFERENCES: ______

EXPERIENCE RESOURCES: ______

Alternate Title cards are secondary entry cards. An Alternate Title is an informal name by which an occupation is known in various sections of the country. These titles are frequently used on occupational information. Alternate Title cards are used as cross references to the DOT Main Titles. Blank cards are used for Alternate Title cards and should be filled out using a standard format as in the following example.

It is not necessary to place any other information on the Alternate Title card. **Users of the system are to refer to the DOT Main Title card for complete information.**

The Alphabetical Card File is developed as materials are processed into the system. Further instructions for filling out both the Alternate and DOT Main Title cards are listed under "Cataloging Single-Job Unbound Materials," page 13. After the cards are completed, they are filed in alphabetical order.



Alternate Title
See DOT Main Title

Area—WTG
Number

WTG Vertical File

The WTG Vertical File is used to store single-job unbound materials after they have been processed by coding, recording, and cataloging. This file contains 12 Career Area dividers and 66 Worker Trait Group dividers. After a piece of material is processed, it is filed behind the appropriate Area — WTG divider.

Materials used to develop the WTG Vertical File are:

- *Standard vertical filing cabinet (two or four drawers)
- *File drawer labels
- *78 file dividers (3 cut, metal tabs)
- Labels for dividers (Attachment B)

The WTG Vertical File is prepared in the following sequence:

1. Label the file dividers, using the prepared labels included in Attachment B. Cut the labels and insert them in the tabs of the file dividers.
2. After inserting the labels, place the dividers in the drawers of the vertical file. A standard vertical file drawer accommodates approximately 400 briefs or pamphlets. If more than one drawer of the file is used for these dividers, label the drawers to show the range of Career Areas and Worker Trait Groups in each drawer.

Processing Single-Job Unbound Materials

Coding Single-Job Unbound Materials

The primary purpose of the coding procedure is to identify the Worker Trait Group to which the occupation described in the single-job unbound material belongs. Coding is crucial to the installation process. Personnel setting up the system should be thoroughly familiar with the coding procedure.

The Supplement to the **Dictionary of Occupational Titles** is used in this procedure.

There are two steps involved in coding. The first step is to identify the DOT Main Title for the occupation described in the material. This is particularly important since **all materials are to be processed into the system by their DOT Main Titles.** The second step is to identify, by number, the Area — WTG to which the DOT Main Title belongs. However, before following these two coding steps, look through Attachment C of this manual, "Worker Trait Group Index to Commercial Briefs." This attachment has all the necessary information for coding many of these briefs. If the title of the brief is not listed in the index, use the following coding directions.

1. Identify the DOT Main Title by using the Supplement to the **Dictionary of Occupational Titles.** In the Alphabetical Index, in the back of the Supplement, locate the title for the brief.

The following example illustrates the Alphabetical Index.

Dot Main Title
Alternate Title

CHEMICAL RESEARCH ENGINEER 008.061-022 (prof & kin) 05.01.01
CHEMICAL-STRENGTH TESTER 582.587-010 (textile) 06.03.02
CHEMICAL-TEST ENGINEER 008.061-026 (prof & kin) 05.01.04
chemical weigher (DYE WEIGHER 550.684-014) 06.04.17
CHEMIST 022.061-010 (prof & kin) 02.01.01
Chemist, Analytical (CHEMIST 022.061-010) 02.01.01
chemist, biological (BIOCHEMIST 041.061-026) 02.02.03
Chemist, Clinical (BIOCHEMIST 041.061-026) 02.02.03
Enzymes (BIOCHEMIST 041.061-026) 02.02.03
(prof & kin) 02.02.04

Undefined Related Title

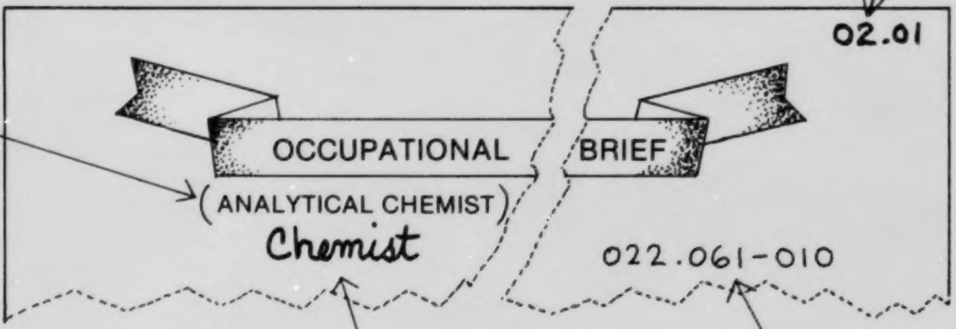
- When the title appears in the listing in all capital letters, then proceed to step 2.
- When the title appears in **beginning capital** letters, it is an Undefined Related Title. The DOT Main Title will appear in parentheses. See the preceding example.
- When the title appears in **all small** letters, it is an Alternate Title. The DOT Main Title will appear in parentheses. See the preceding example.
- When the title on the brief is an Alternate or Undefined Related Title, mark parentheses around it and write the correct DOT Main Title directly above or below it. Use a red or other colored marking pen to make the DOT Main Title distinctive.
- On the materials, write the nine-digit code found in the Alphabetical Index for the titles. If this code has been printed on the material, verify it.

2. Identify the number of the Area — WTG to which the DOT Main Title belongs. This number is located at the end of each entry line in the Alphabetical Index as shown in the following example.

Chemist, Enzyme
CHEMIST, FOOD 022.061-014 (prof & kin)
Chemist, Inorganic (CHEMIST, 022.061-010) 02.01.01
Chemist, Organic (CHEMIST 022.061-010) 02.01.01
Chemist, Pharmaceutical (BIOCHEMIST 041.061-026) 02.02.03
Chemist, Physical (CHEMIST 022.061-010) 02.01.01
Chemist, Pollution Control (CHEMIST 022.061-010) 02.01.01
Chemist, Proteins (BIOCHEMIST 041.061-026) 02.02.03
CHEMISTRY TECHNOLOGIST (078.261-010
Chemist, Steriods (BIOCHEMIST
CHEMIST

Area — WTG Number

On the brief, write the four-digit Area — WTG number in the upper right-hand corner. The following illustration is an example of a brief marked to show all coding information.



Write the Area — WTG Number.

Mark parentheses around Alternate Title.

Write DOT Main Title in color.

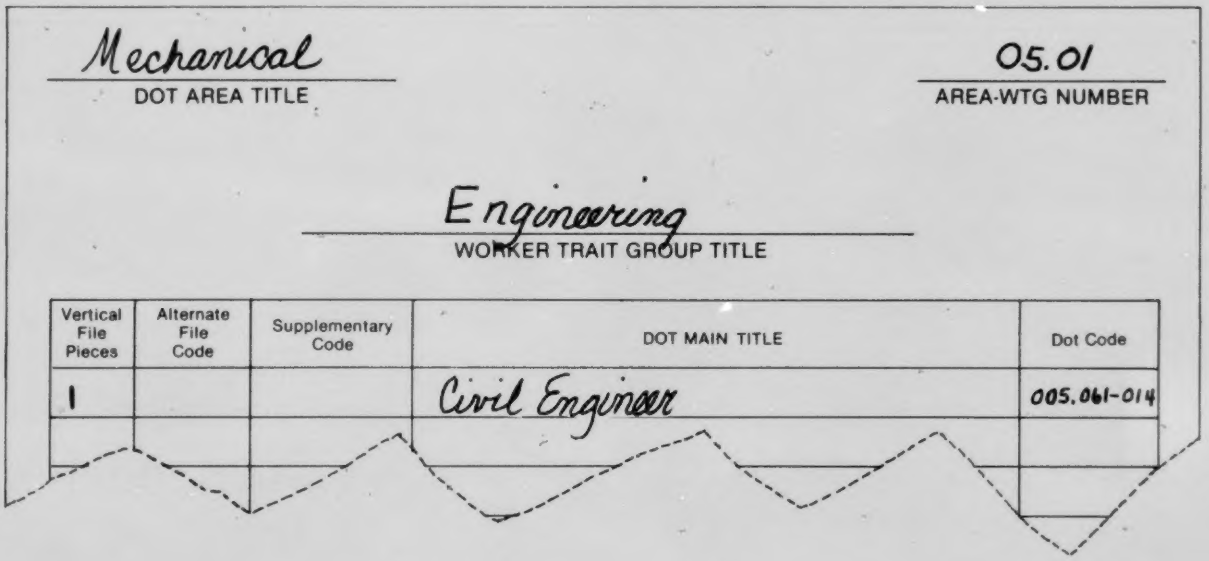
Write DOT code.

Recording Single-Job Unbound Materials

After coding single-job unbound materials, DOT Main Titles are recorded on the forms in the **File Content Notebook. Alternate or Undefined Related Titles are not recorded.** These forms have five columns. However, only three columns are used at this time: the first for recording tally marks for each piece of material filed, the fourth for the DOT Main Title, and the fifth for the nine-digit DOT code. The second and third columns are not used in recording single-job unbound materials.

To record a DOT Main Title, open the **File Content Notebook** to the form designated by the Area — WTG number on the material. Make an entry on this form as described in the following paragraphs.

If there are no entries on the form, enter the DOT Main Title in the fourth column and the nine-digit code in the fifth column. In the first column, make one **pencil** tally mark. A pencil should be used so that tally marks can be changed easily. When additional materials are processed for this DOT Main Title, a tally mark is made for each piece. **Only one entry is made for any DOT Main Title.** The following example shows the correct entry for Civil Engineer, Area — WTG 05.01.



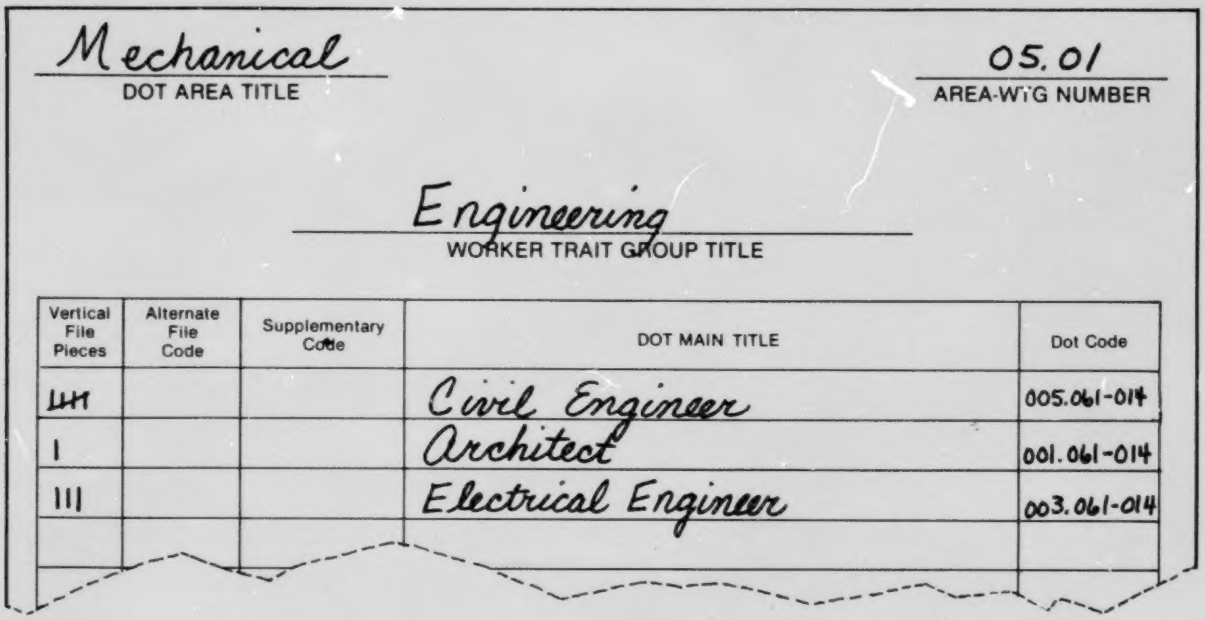
Mechanical
DOT AREA TITLE

05.01
AREA-WTG NUMBER

Engineering
WORKER TRAIT GROUP TITLE

Vertical File Pieces	Alternate File Code	Supplementary Code	DOT MAIN TITLE	Dot Code
1			Civil Engineer	005.061-014

If the form contains one or more occupational title entries, scan the fourth column for the DOT Main Title being processed. If there is an entry for this title, make an additional pencil tally mark in the first column. If there is no entry for the title, the occupational title should be entered. The following illustration shows an example of multiple entries and tally marks.



Mechanical
DOT AREA TITLE

05.01
AREA-WTG NUMBER

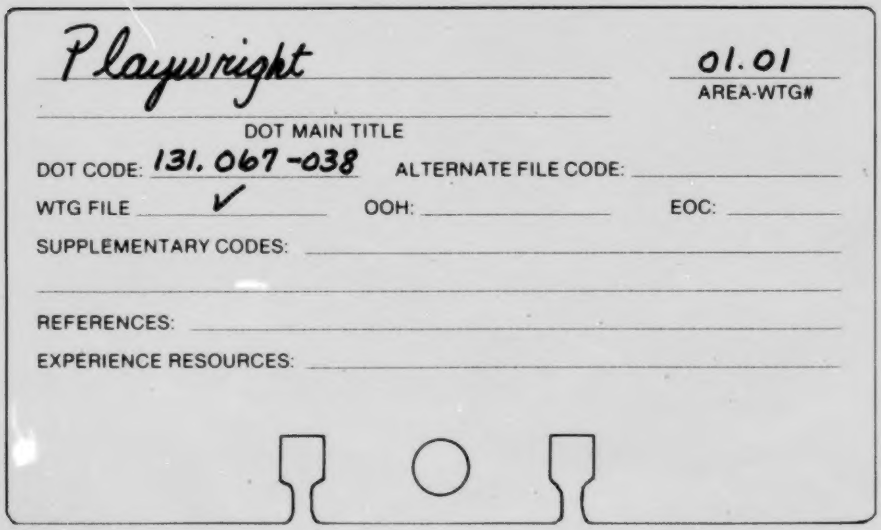
Engineering
WORKER TRAIT GROUP TITLE

Vertical File Pieces	Alternate File Code	Supplementary Code	DOT MAIN TITLE	Dot Code
卌			Civil Engineer	005.061-014
I			Architect	001.061-014
III			Electrical Engineer	003.061-014

Cataloging Single-Job Unbound Materials

To catalog single-job unbound materials, an entry card is filled out for each new DOT Main Title, and for any new Alternate Titles appearing on the materials. To complete this procedure, these cards are placed in the Alphabetical Card File. The following paragraphs describe how to complete Main and Alternate Title entry cards.

DOT Main Title Cards. Write or type the DOT Main Title, the nine-digit DOT code, and the Area — WTG number on the appropriate lines of the printed card. Place a pencil check mark (✓) in the WTG File blank to indicate that material about this title is filed in the Vertical File, as shown in the following illustration:



Playwright
DOT MAIN TITLE

01.01
AREA-WTG#

DOT CODE: 131.067-038 ALTERNATE FILE CODE:

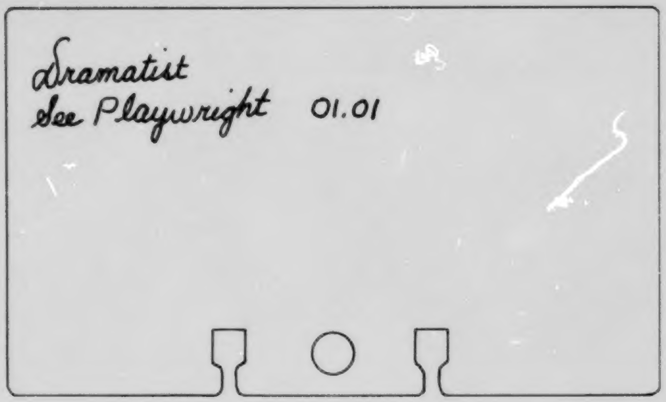
WTG FILE ✓ OOH: EOC:

SUPPLEMENTARY CODES:

REFERENCES:

EXPERIENCE RESOURCES:

Alternate Title Cards. Fill out a blank card to cross-reference the Alternate Title to the DOT Main Title and its Area — WTG number, as in the following example:



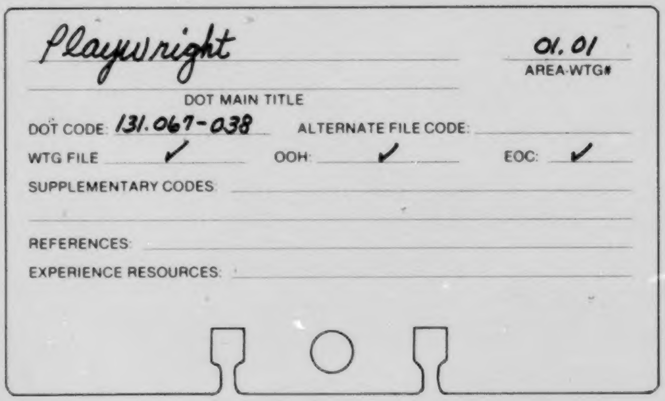
Dramatist
See Playwright 01.01

Filing Entry Cards. Place both the DOT Main Title card and the Alternate Title card in the Alphabetical Card File. Only one entry card is needed for any DOT Main Title or Alternate Title no matter how many pieces of material are processed.

As the basic system is being developed, scan the cards in the Alphabetical Card File for the titles being processed before making any cards. If a card for either a DOT Main Title or Alternate Title is already on the file, do not make a new one or add any information.

After processing all of the available single-job unbound materials into the basic system, additional resources may be added. Two major bound resources, the **Occupational Outlook Handbook** (OOH) and the **Encyclopedia of Careers** (EOC), have been indexed to the Worker Trait Groups. Reference to the titles in these resources are added to the basic system by using the **Worker Trait Group Index to Occupational Information*** and the Alphabetical Card File. Use the following processing steps.

1. Check the Alphabetical Card File for each Main Title listed in the index. If there is a card in the Alphabetical Card File for this title, place a check mark (✓) in the appropriate blank as shown in the following illustration.
2. If there is a Main Title in the index that does not have a card in the Alphabetical Card File, then make one, using the preceding instructions. However, do not place a check mark in the WTG Vertical File blank as this material will not be found in the Vertical File.
3. The index also contains Alternate titles. Cards should be made for those titles following instructions for the Alternate Title cards.



Playwright 01.01
AREA-WTG#
DOT MAIN TITLE
DOT CODE: 131.067-038 ALTERNATE FILE CODE:
WTG FILE ✓ OOH: ✓ EOC: ✓
SUPPLEMENTARY CODES:
REFERENCES:
EXPERIENCE RESOURCES:

Filing Single Unbound Materials

After coding, recording, and cataloging, single-job unbound materials are placed in the Vertical File behind the appropriate file dividers. Although it is not essential to the operation of the system, materials filed behind each divider may be organized by the nine-digit DOT code, in alphabetical order by the DOT Main Titles, or by other means of grouping and organizing materials.

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*Developed by the Appalachia Educational Laboratory and published by McKnight Publishing Company.

OPERATING THE SYSTEM

Check-Out/Check-In Procedures

The projected use of the materials in the system will determine the type of operating procedures established. When materials are not to be used outside the CIS location, check-out/check-in procedures may not be necessary. However, if students or others will be allowed to use materials outside the CIS area or for a prolonged period of time, then a sign-out sheet should be used and a return area determined. This procedure may be necessary if the CIS location has very limited space for use of materials, and students need to go to another area to use them. For example, the CIS may be located in a small foyer and students may want to check out materials to use in a study hall.

The sign-out sheet should be a simple form containing spaces for the student's name, title of the material, and dates checked out and in. The following is an example of a sign-out sheet.

CIS SIGN-OUT SHEET			
Name	Materials	Date	
		Out	In

This type of form can be maintained in a card file, spiral notebook, or other binder. When the material is returned, the form should be properly marked. This responsibility can be assigned to student assistants.

A return area should be established and clearly marked to reduce the possibility of materials being misplaced after they have been returned. This return area can be a wire basket or cardboard box, conspicuously placed on top of the file or on a desk or table.

Refiling Procedures

Materials should not be kept out of the system for an extended length of time. Refiling of materials should occur as soon as possible. This activity many be performed by the users of the materials or by assigned personnel.

A refiling schedule should be established, determining whether materials are replaced immediately after use, at the end of a period, or at the end of a day. This schedule can be modified as the usage pattern of the CIS changes.

Checking for Misfiled or Lost Materials

Occasionally, materials in the filing and indexing system may be misfiled or lost. To insure that materials are filed in the correct divisions of the WTG Vertical File, a periodic check should be made by scanning the Area — WTG numbers written on the materials. This procedure might be conducted weekly or monthly, depending on how frequently the file is used.

To determine whether any materials are missing from the system, each division of the WTG Vertical File can be checked against the corresponding entries and tally marks in the **File Content Notebook.** A check for missing materials should be done annually or semi-annually, again depending on the frequency with which the materials are used.

EXPANDING THE SYSTEM

The career information resources that are used to expand the **Career Information System** are divided into two distinct types:

- **Media Resources**
  - audiovisual materials
  - bound materials
  - omnibus materials
- **Experience Resources**
  - resource persons
  - field trips
  - simulation experiences
  - work experiences
  - classroom experiences
  - career clubs

Media resources include materials which cannot be filed such as books and audiovisual materials and all types of omnibus materials which can be physically placed into the system. These resources are processed into the **File Content Notebook** and the Alphabetical Card File.

Standard references, such as the **Occupational Outlook Handbook** (OOH) and the **Encyclopedia of Careers** (EOC), are part of the basic system and have already been processed. Other references similar to the OOH may be entered into the system. These references should be processed into the Alphabetical Card File and the **Worker Trait Group Index to Occupational Information.** The occupations included in the reference should be listed by Worker Trait Groups. The occupations' DOT Main Title, nine-digit code, and the page number of the reference or other source of identification to the specific location in the resource should be recorded. Use the format of the **Worker Trait Group Index to Occupational Information** as a guide to set up indexes to references similar to the OOH.

Experience resources include a variety of activities that are occupationally oriented. These are intangible, but can be processed into the system by indexing and entering them in the **Worker Trait Group Index to Occupational Information** and the Alphabetical Card File.

Any resource or activity that is specific to an occupation or related to a particular Career Area or Worker Trait Group can be used in expanding the system. The expansion of the WTG filing and indexing system is customized for each school. This expansion is directed by two criteria: (1) the kinds of career information resources which are available, and (2) the type of access desired. This phase of development will involve the same general physical components and processing procedures as those used to set up the basic system. However, some modification of these components and procedures is necessary, due to the diverse nature of the resources being incorporated.

The three procedures used to expand the basic system are:

- Preparing supplementary physical components
- Processing media resources
- Processing experience resources

Preparing Supplementary Physical Components

The supplementary physical components are prepared by adding a section to the **Worker Trait Group Index to Occupational Information** or **File Content Notebook** and by acquiring the necessary storage equipment, such as bookshelves, audiovisual racks or cabinets, and filing boxes.

The Supplementary Section of the **File Content Notebook** is used to record the media resources processed into the system. The supplementary storage components are used to store materials such as books, films, filmstrips, and cassettes. Additional sections are added to the **Worker Trait Group Index to Occupational Information** for categories such as Experience Resources or for additional standard references such as **Vital Information for Education and Work** (VIEW).

The following are instructions for preparing physical components for all types of media resources. **These instructions are to be used only to the extent needed to process available resources.**

File Content Notebook: Supplementary Section

The Supplementary Section of the **File Content Notebook** has two divisions — AUDIOVISUAL (Av) and BOUND (Bd). These divisions are used to record both single-job and omnibus materials.

Each division has printed forms for recording the media resources to indicate their storage location. All occupations described in these materials are indexed to Career Areas — Worker Trait Groups and entered on the appropriate notebook form.

Materials needed for the Supplementary Section are:

- Supplemental file forms
- **File Content Notebook**
- 2 colored tab notebook dividers

Prepare the Supplementary Section in the following manner:

1. Fill in a printed Supplementary Section form for the BOUND (Bd) division, placing the title and abbreviation of the division on the top line:

Bound (Bd)
DIVISION TITLE / CODE

Supplementary Code	TITLE OF MATERIAL	Location	AREA-WTG NUMBER(S)

2. For the AUDIOVISUAL (Av) division, prepare only as many printed Supplementary Section forms as there are different types of audiovisual materials to be processed. Because audiovisuals are packaged differently, they are kept separate in storage. The following list of suggested titles and abbreviations for different types of audiovisual materials may be used as a guide.

AUDIOVISUAL/Cassette	Av/C
AUDIOVISUAL/Film	Av/F
AUDIOVISUAL/Filmstrip	Av/Fs
AUDIOVISUAL/Filmloop	Ava/Fl
AUDIOVISUAL/Record	Av/R
AUDIOVISUAL/Tapes	Av/T
AUDIOVISUAL/Videotape Recording	Av/VTR

A Supplementary section form follows for AUDIOVISUAL/Cassette (AV/C):

Audiovisual/Cassette (AV/C)
DIVISION TITLE / CODE

Supplementary Code	TITLE OF MATERIAL	Location	AREA-WTG NUMBER(S)

3. On the Supplementary Section dividers, list the abbreviations for Avs and Bds and their titles in full.
4. Place the Supplementary Section dividers and forms in the **File Content Notebook,** beginning after the last Worker Trait Group.

Storage Components: Supplementary Shelves, Cabinets, and Filing Drawers:

The materials used to expand the system cannot be physically filed or have a range of occupations belonging to different Worker Trait Groups. For these reasons, it is necessary to complement the Vertical File with shelves, cabinets, and filing boxes. Shelves are used to store materials which cannot be filed such as books. Cabinets or racks are used for storing the more fragile audiovisual materials. Filing boxes are used to store some types of omnibus unbound materials that do not specifically relate to a Career Area or Worker Trait Group.

The choice of storage components is another way in which the system is customized to fit individual needs or constraints. Some points to be considered in making this choice are:

- what types of additional materials are to be processed?
- what storage equipment is already available?
- what space problems exist?

If possible, the supplementary storage components should be placed in the same general area as the Vertical File.

Processing Media Resources

The four procedures used to install the basic system — coding, recording, cataloging, and filing — are also used to process the media resources. These procedures are modified for each type of media resources. The major differences are in (1) marking the materials, (2) assigning supplementary codes, and (3) storing the materials.

Single-Job Bound Materials

Books and other bound references about a single job are processed into the WTG filing and indexing system by coding, cataloging, and recording the DOT Main Title. The appropriate coding information is marked on the inside front cover. They are assigned a supplementary code and are recorded in the "BOUND" division of the **File Content Notebook.** The assigned supplementary code is marked on a small self-adhesive label and affixed to the spine of the material. Single-job bound materials are stored on shelves by their supplementary codes.

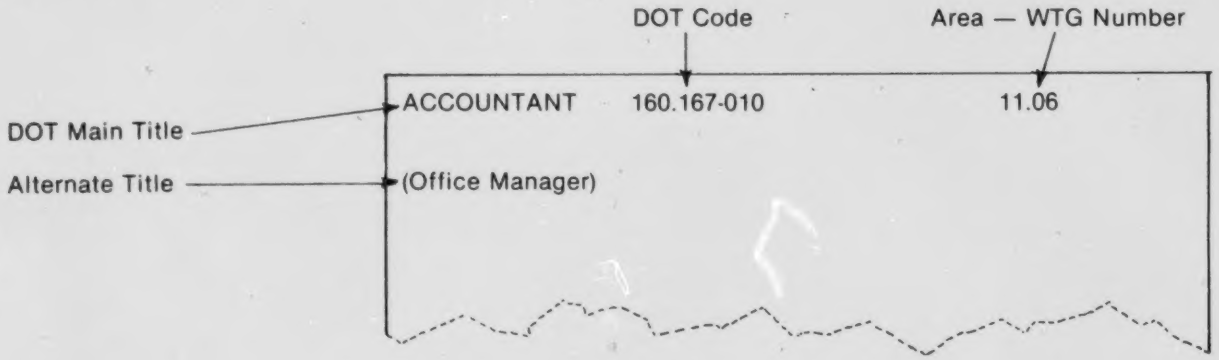
The following are used in processing single-job bound materials.

- *Supplement to the **Dictionary of Occupational Titles**
- **File Content Notebook**
- Alphabetical Card File
- *Bookshelves
- *Spine labels (self-adhesive)

a. **Coding Single-Job Bound Materials.** Before coding a book, the occupation it describes must be identified. Sometimes this is evident in the title of the book, e.g., **So you Want To Be An Accountant?** After identifying the occupational title, proceed with coding. To code single-job bound materials, follow these steps:

- Identify the DOT Main Title.
- Identify the nine-digit DOT code.
- Identify the Area — WTG number to which the DOT Main Title belongs.

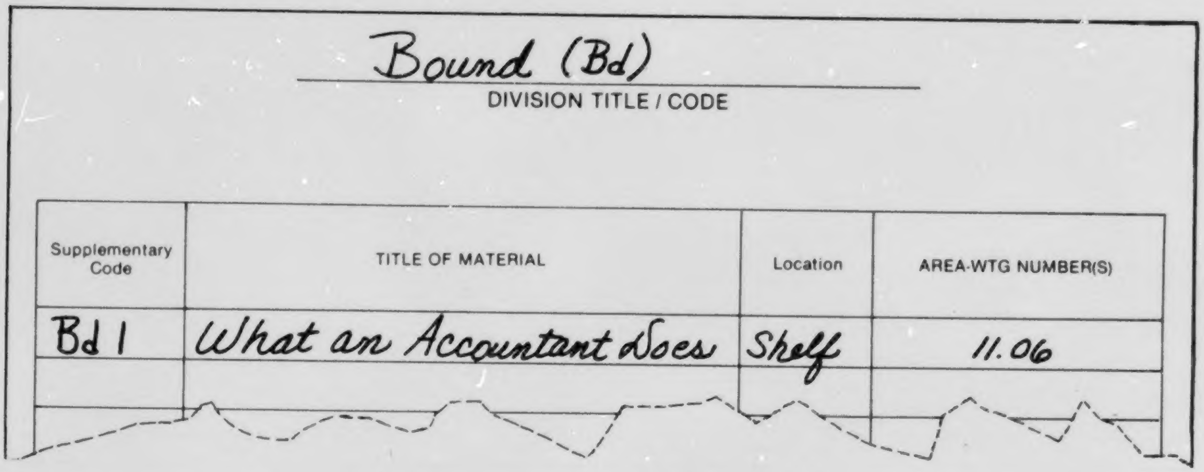
Write this information on the inside front cover of the bound material, as shown in the following illustration:



b. **Recording Single-Job Bound Materials.** Single-job bound materials are recorded by assigning them supplementary codes and entering the code, title, location, and WTG number in the main and supplementary sections of the **File Content Notebook.**

To assign the supplementary code, open the **File Content Notebook** to the "BOUND (Bd)" division. If there are no entries on the form, the supplementary code is "Bd 1," indicating that this is the first piece of "BOUND" material processed. Other supplementary codes are assigned in sequence, as Bd 2, Bd 3, Bd 4.

After assigning the supplementary code, enter the following information in the appropriate columns on the "BOUND (Bd)" form as illustrated:



Bound (Bd)
DIVISION TITLE / CODE

Supplementary Code	TITLE OF MATERIAL	Location	AREA-WTG NUMBER(S)
Bd 1	What an Accountant Does	Shelf	11.06

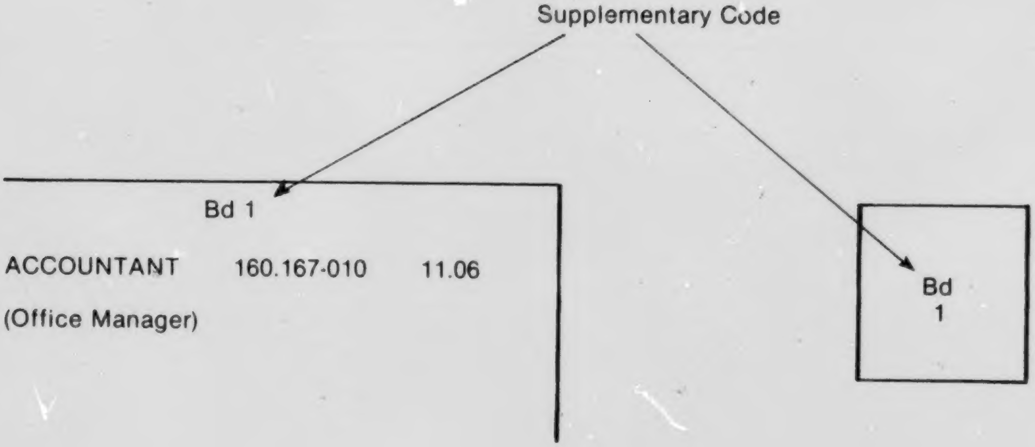
Column 1: Supplementary code — abbreviation of the division title and an identifying number, e.g., Bd1, Bd 2, Bd 3.

Column 2: Title of Material: — title appearing on front cover.

Column 3: Location — where the material is stored, such as on a shelf.

Column 4: Area — WTG — number of the Area — Worker Trait Group for the occupation described.

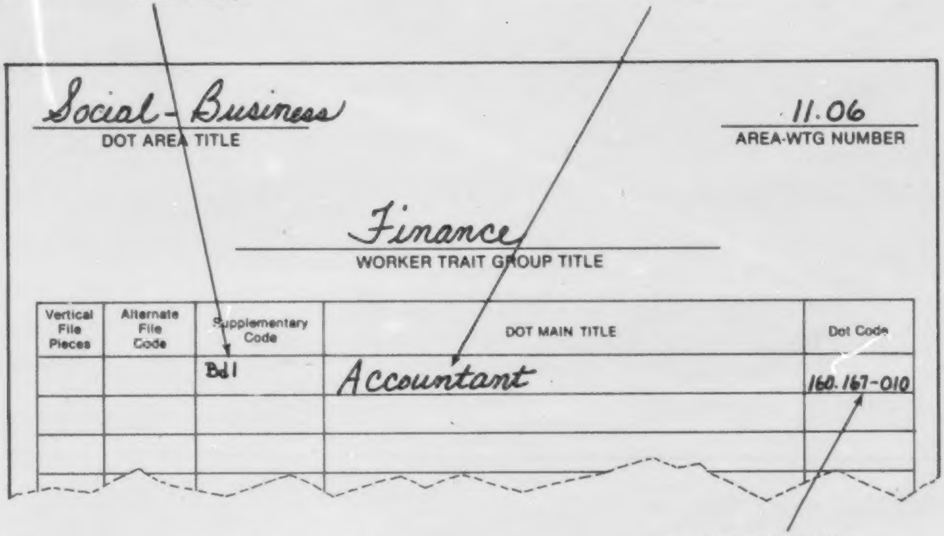
The assigned supplementary code is written on the inside front cover, and on a spine label affixed to the material as shown in the following illustration.



Complete the recording procedure by making an entry for the occupational title on the appropriate Area — WTG form in the **File Content Notebook.** Use the following illustration as a guide.

a. Enter the supplementary code in Column 3 (leaving space for additional codes).

b. Write the DOT Main Title in Column 4.



Social-Business
DOT AREA TITLE

11.06
AREA-WTG NUMBER

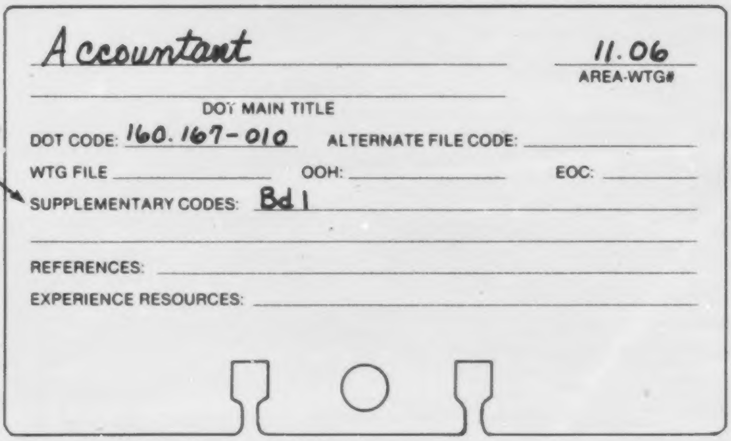
Finance
WORKER TRAIT GROUP TITLE

Vertical File Pieces	Alternate File Code	Supplementary Code	DOT MAIN TITLE	Dot Code
		Bd1	Accountant	160.167-010

c. Record the DOT code in Column 5.

c. **Cataloging Single-Job Bound Materials.** The cataloging procedure for single-job bound materials is the same as that for single-job unbound materials described on pages 13-14. Follow these instructions to fill out entry cards for DOT Main Titles or Alternate Titles. However, when filling out the DOT Main Title card, enter the supplementary code in the proper blank, as shown in the following illustration.

Add Supplementary Code



Accountant
DOT MAIN TITLE

11.06
AREA-WTG#

DOT CODE: 160.167-010 ALTERNATE FILE CODE:

WTG FILE OOH: EOC:

SUPPLEMENTARY CODES: Bd1

REFERENCES:

EXPERIENCE RESOURCES:

Only one entry card is made and placed in the Alphabetical Card File for any DOT Main Title or Alternate title.

d. **Storing Single-Job Bound Materials.** Single-job bound materials are stored on bookshelves. Materials are shelved in order of their supplementary codes, such as Bd 1, Bd 2, and Bd 3.

Single-Job Audiovisual Materials

Audiovisual materials about a single job are packaged in many forms, including cassettes, films, and filmstrips. Single-job audiovisual materials are processed into the system by coding, recording, and cataloging the occupational title described in each. These materials are assigned a supplementary code, beginning with Av, and are recorded in the "AUDIOVISUAL" division of the **File Content Notebook.** All coding information is marked on a self-adhesive label and affixed to the material. A smaller label may be used to mark the audiovisual container with the supplementary code.

Each of the different forms of audiovisual materials is usually stored separately. These materials can be stored in audiovisual cabinets, racks, or on shelves by the supplementary codes.

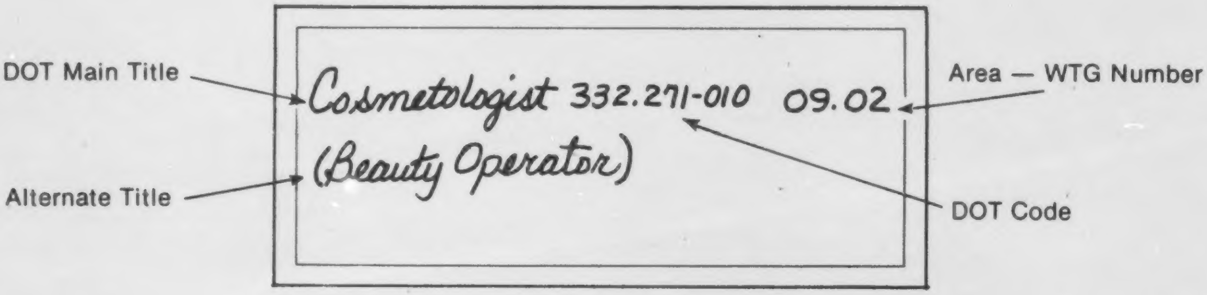
The following items are used to process single-job audiovisual materials:

- *Supplement to the **Dictionary of Occupational Titles**
- **File Content Notebook**
- Alphabetical Card File
- *Audiovisual cabinets or racks
- *Self-adhesive labels (2" × 4")
- *Spine labels (self-adhesive)

a. **Coding Single-Job Audiovisual Materials.** It may be necessary to preview the audiovisual material to ascertain the occupational title it describes. After identifying the occupational title, proceed with coding. To code single-job audiovisual materials, follow these steps:

- Identify the DOT Main Title.
- Identify the nine-digit DOT code.
- Identify the number of the Area — WTG to which the DOT Main Title belongs.

Write the coding information on a self-adhesive label as shown in the following example.



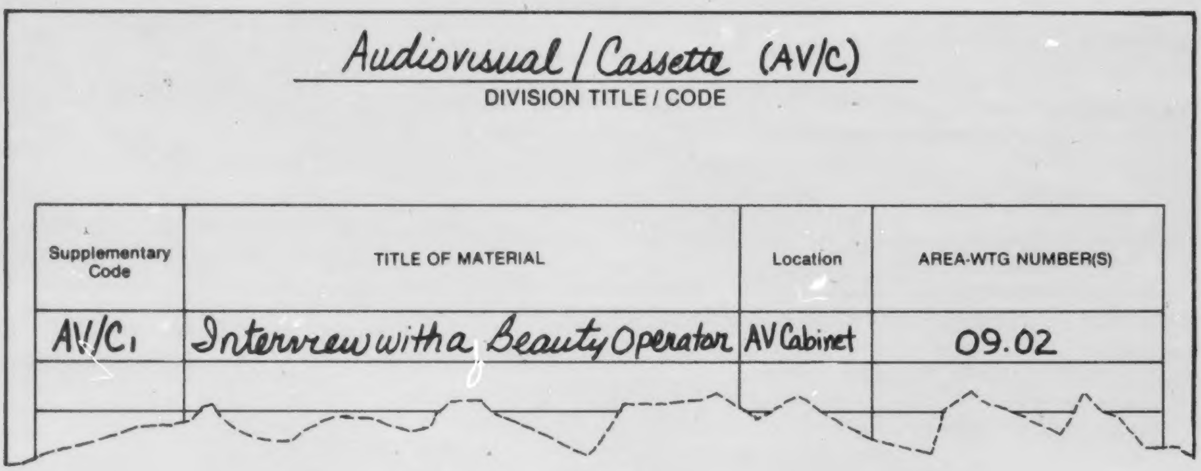
b. **Recording Single-Job Audiovisual Materials.** Single-job audiovisual materials are recorded by assigning supplementary codes, and making entries in the main and supplementary sections of the **File Content Notebook.**

To assign this supplementary code, open the **File Content Notebook** to the "AUDIOVISUAL (Av)" division. This division has one or more printed forms, depending on the different types of audiovisual materials processed.

Turn to the appropriate supplementary form, such as "AUDIOVISUAL/Cassette (AV/C)." If there are no entries on this form, the supplementary code is Av/Cl, indicating that the audiovisual material is in cassette form and is the first cassette processed into the system. Other supplementary codes are assigned in sequence as Av/C2, Av/C3, and Av/C4. Apply this sequence to all other types of audiovisual materials. The following is a list of suggested code abbreviations:

AUDIOVISUAL/Cassette	Av/C
AUDIOVISUAL/Film	Av/F
AUDIOVISUAL/Filmstrip	Av/Fs
AUDIOVISUAL/Filmloop	Av/Fl
AUDIOVISUAL/Record	Av/R
AUDIOVISUAL/Tape	Av/T
AUDIOVISUAL/Videotape Recording	Av/VTR

After assigning the supplementary code, enter the following information in the appropriate columns of the "AUDIOVISUAL/Cassette (Av/C)" form (or other "AUDIOVISUAL" form) as illustrated:



Audiovisual / Cassette (AV/C)
DIVISION TITLE / CODE

Supplementary Code	TITLE OF MATERIAL	Location	AREA-WTG NUMBER(S)
AV/C1	Interview with a Beauty Operator	AV Cabinet	09.02

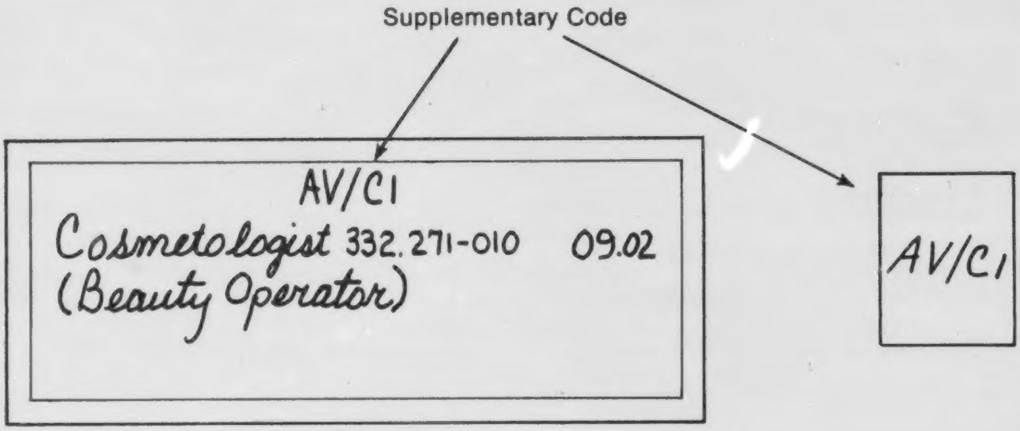
Column 1. Supplementary Code — abbreviation of division title, type of packaging, and identifying number, e.g., Av/Cl, Av/C2, Av/C3.

Column 2. Title of Material — title as it appears on the material.

Column 3. Location — where the material is stored, such as AUDIOVISUAL (Av) cabinet.

Column 4. Area — WTG — number of the Area — Worker Trait Group for the occupation described.

Write the assigned supplementary code on the top of the self-adhesive label. A smaller self-adhesive label may be made for this code and attached to the material for storage purposes.



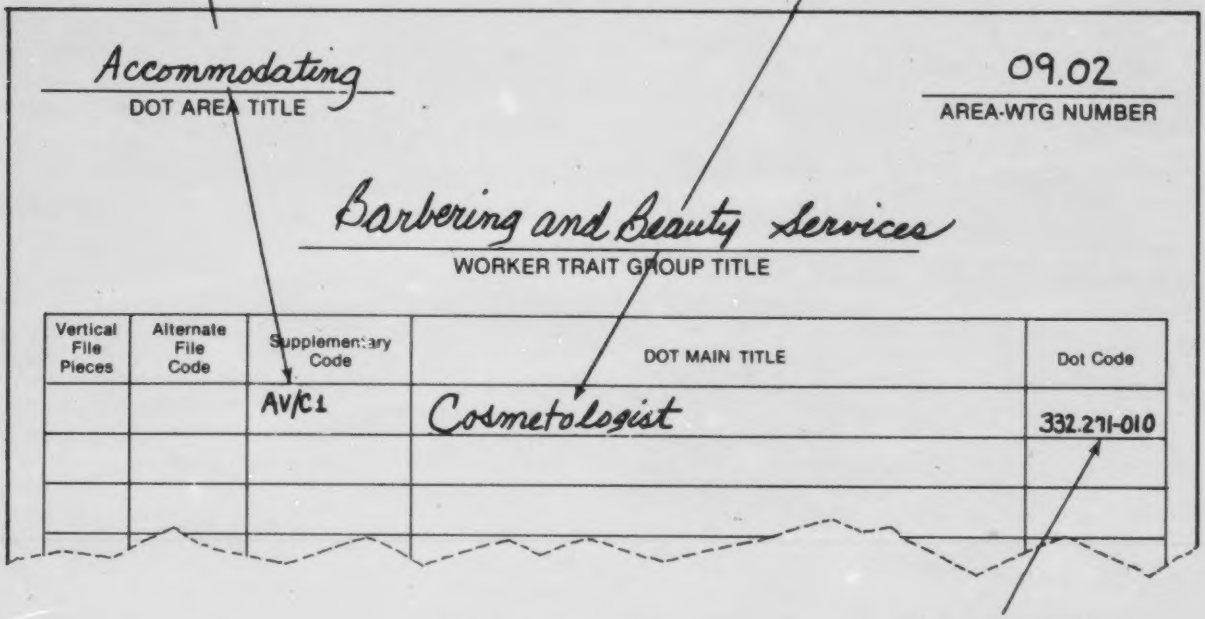
AV/C1
Cosmetologist 332.271-010 09.02
(Beauty Operator)

AV/C1

Complete the recording procedure by making an entry for the occupational title on the appropriate Area — WTG form in the **File Content Notebook.** Use the following illustration as a guide.

a. Enter the supplementary code in Column 3 (leaving space for additional codes).

b. Write the DOT Main Title in Column 4.



Accommodating
DOT AREA TITLE

09.02
AREA-WTG NUMBER

Barbering and Beauty Services
WORKER TRAIT GROUP TITLE

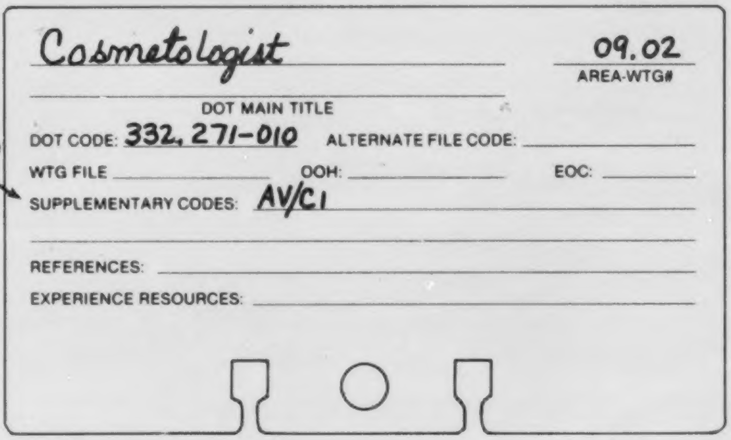
Vertical File Pieces	Alternate File Code	Supplementary Code	DOT MAIN TITLE	Dot Code
		AV/C1	Cosmetologist	332.271-010

c. Record the DOT code in Column 5.

c. **Cataloging Single-Job Audiovisual Materials.**

The cataloging procedure for single-job audiovisual materials is the same as for single-job unbound material, described on pages 13-14. Follow these instructions to fill out entry cards for DOT Main Titles and Alternate Titles. However, when filling out the DOT Main Title card, enter the supplementary code in the proper blank as shown in the following example.

Add Supplementary Code



Cosmetologist
DOT MAIN TITLE

09.02
AREA-WTG#

DOT CODE: 332.271-010 ALTERNATE FILE CODE:

WTG FILE OOH: EOC:

SUPPLEMENTARY CODES: AV/C1

REFERENCES:

EXPERIENCE RESOURCES:

Only one entry card is made and placed in the Alphabetical Card File for any DOT Main Title or Alternate Title.

d. **Storing Single-Job Audiovisual Materials.** Single-job audiovisual materials can be stored in cabinets or racks. Materials are usually stored according to their packaging. For example, all cassettes can be kept in one cabinet, in order of their supplementary codes: Av/Cl, Av/C2, Av/C3.

Omnibus Materials

Omnibus materials contain descriptions of more than one occupation. These materials come in many forms, such as briefs, books, and audiovisuals. Some omnibus materials describe several specific occupations while others describe, in general terms, a field of work or industry. Thus, omnibus materials present a special organizational problem. Some of them may be directly linked to one of the twelve Career Areas. Others may be so general in nature that they encompass several Career Areas at once.

Omnibus materials can be processed into the system. However, it is **strongly** advised that all omnibus materials be reviewed to determine their usability and value. Only those omnibus materials containing adequate and specific information about occupations or a Career Area as a whole should be processed. Omnibus materials with overly general or limited information about specific occupations should be placed in a separate file or browsing area. Some generalized omnibus materials, such as briefs and pamphlets, can be used in bulletin board displays. The following procedures describe how to process omnibus unbound, bound, and audiovisual materials.

Omnibus Unbound Materials. Determine the Career Area code for the material. If it cannot be determined from the title, locate some of the described occupations in the Alphabetical Index of the supplement to the **Dictionary of Occupational Titles.** Record the Career Area code on the material and file the material behind the Career Area divider in the Vertical File. Write the title of the material on a sheet of notebook paper to be kept behind the Career Area divider in the **File Content Notebook.** Be sure to write "Vertical File" after each title to indicate location. Other than this sheet, no additional processing into the system is necessary.

Omnibus Bound Materials. Follow the preceding procedures to determine the Career Area code. Record the code on a spine label and attach it to the material. Omnibus bound materials should be placed on a shelf and kept in order by their Career Area codes. Write the title and location of the material on a sheet of notebook paper to be kept behind the Career Area divider in the **File Content Notebook.**

Omnibus Audiovisual Materials. Identify the Career Area code for the material by following the preceding procedures. Write this code on a small label and attach it to the material. Omnibus audiovisuals should be stored in an audiovisual cabinet and kept in order by their Career Area codes. Write the title and location of the material on a sheet of notebook paper to be kept behind the Career Area divider in the **File Content Notebook.**

PROCESSING EXPERIENCE RESOURCES

Experience resources such as work experiences, career clubs, and resource people are processed into the system by indexing. Each occupational title representing the resource is coded to the appropriate Worker Trait Group. References to these resources are kept in the "Experience Resources" section of the **Worker Trait Group Index to Occupational Information.** Students will locate these resources through the individual in charge of the school's career information resources or the person who is responsible for scheduling these activities.

The procedures for processing experience resources include: coding, recording, and cataloging.

Coding Experience Resources

Before initiating the coding procedure for a particular type of experience resource, prepare a worksheet listing all occupational titles and their sources. After making this worksheet, proceed with coding, following these steps:

- Identify the DOT Main Title.
- Identify the nine-digit DOT code.
- Identify the number of the Area — WTG to which the DOT Main Title belongs.

The following illustration shows a sample worksheet which contains all the coded information for community resource people. Since this is a list of people resources, students should not have direct access to it, but should go through the person responsible for coordinating contacts and scheduling.

SAMPLE WORKSHEET

Resource Persons Worksheet

Occupational Title	Dot Code	Area/WTG	Source
Photographer, Still	143.062-030	01.02	Earl White White's Photos City 111-0101
Floral Designer	142.081-010	01.02	John Shdeed City Floral Co. City 100-1111
Display Designer	142.051-010	01.02	Sara Boast Peeks Mercantile City 110-1110

Recording Experience Resources

Experience resources are recorded in the "Experience Resources" section of the **Worker Trait Group Index to Occupational Information.** The "Experience Resources" divider and forms to be recorded and inserted in the **Worker Trait Group Index to Occupational Information** are not provided. The following sample form and code suggestions can be used as guidelines to help the person in charge of career resources design the forms.

SAMPLE FORM

01.02
AREA — WTG NUMBER

Visual Arts
WORKER TRAIT GROUP TITLE

DOT MAIN TITLE	EXPERIENCE CODE	DOT CODE
Display Designer	RP, WE, FT	142.051-010
Floral Designer	WE, RP	142.081-010
Photographer, Still	RP, CC	143.062-030

CODE SUGGESTIONS

Work Experience	WE
Resource Person	RP
Career Club	CC
Field Trip	FT

On the "Experience Resources" divider, record the code definitions that are selected to be used.

Cataloging Experience Resources

To catalog experience resources, follow the procedures listed on pages 13-14 to fill out entry cards for DOT Main Titles or Alternate Titles. However, modify these procedures by entering the code in the blank for Experience Resources. Complete the procedure by placing the card in the Alphabetical Card File.

MAINTAINING THE SYSTEM

The effort needed to maintain the WTG filing and indexing system can be reduced if maintenance procedures are established. The following are suggestions.

"Weeding" Outdated Materials

Time should be set aside periodically during the school year to check the system for outdated materials and determine what should be discarded and replaced.

For outdated materials, the standard rule is to discard those materials which are five years old or older. Some materials may be out-of-date sooner, or may have relevance for a longer period than five years. Therefore, use discretion in applying this rule. Major reference resources (such as the DOT, OOH, or EOC), books and audiovisual materials, or "one-of-a kind" materials should be kept until suitable replacements are obtained. When materials over five years old are retained, mark their covers with the statement: "CAUTION — MAY CONTAIN OUT-OF-DATE INFORMATION." System users should be informed that specific information contained in these materials such as salaries and job outlook, should be viewed critically.

Outdated materials can be identified by publication or copyright dates and marked or pulled from the system. Materials should be checked to determine what is to be discarded and reordered. If materials are discarded without replacements, amend the tally entry for the occupational title in the **File Content Notebook** and change the information on the Alphabetical Card File.

This "weeding" may not be necessary for certain materials, such as commercially published briefs, when a subscription service has been acquired. A commercial subscription service replaces briefs periodically to keep them up-to-date.

Any materials which are discarded may be displayed for students to take. These materials should be clearly stamped "DISCARD."

Experience Resources

When experience resources, such as a resource person, are no longer available, they should be removed from the list kept by the person in charge of career information resources. The occupational title should be removed from the resource form in the **Worker Trait Group Index to Occupational Information** if this was the only person related to the occupation. In addition, the entry in the Alphabetical Card File should be changed. The experience resources should be evaluated. Those which are inappropriate or to which students do not relate well should be eliminated from the system. As part of this evaluation, students who used the resources should be debriefed.

Acquiring Replacement Materials

Replacement materials can be acquired through commercial subscription services or by checking with the publisher to see if the material has been revised. Discarded materials may be replaced with publications from other sources which cover the same occupational title.

Free materials for updating the system may be obtained from such sources as government agencies and professional organizations. The **Educator's Guide to Free Guidance Materials** (Educator's Progress Service, Randolph, Wisconsin) as well as many other bibliographies index free materials. Use caution to select free materials, as they may represent biased concepts or recruitment literature.

Listings of current career information resources, including free materials, are also contained in such publications as the **Personnel and Guidance Journal** (American Personnel and Guidance Association, Washington, D.C.), the **Careers Index** (Chronicle Guidance Publications, Moravia, New York), and the **Vertical File Index** (H.W. Wilson, Bronx, New York).

Processing Replacement Materials

Replacement materials should be processed as soon as they are received, or at short periodic intervals, to prevent them from accumulating into quantities requiring a great deal of processing time. To process single-job materials, copy the coding information from the out-of-date material onto the replacement material and file it. No changes in the **File Content Notebook** or Alphabetical Card File are necessary unless the outdated material has been discarded prior to receiving the new material.

Follow the procedures used to expand the system to process other types of replacement resources, such as omnibus briefs.

ADAPTATION PROCEDURES

Occupational information filing systems, such as Bennett, SRA, Chronicle, and Careers, as well as "homemade" ones, vary in structure. Materials in these systems are usually organized alphabetically, by broad areas of work, DOT codes, or by some variation of the DOT classification structure. In some instances, the Dewey decimal library classification is used. These systems have value for specific types of use. However, they do not provide for exploration of occupational groups based upon the person-worker dimension, as does the Worker Trait Group structure of the **Career Information System.**

Established systems can be easily adapted to the Worker Trait Group structure without disrupting their physical unity. The adaptation can provide the basic utility and purposes of both systems.

To adapt other systems to the Worker Trait Group structure, materials are coded, recorded, and cataloged as described in previous sections. However, materials are filed by the existing filing system rather than by Worker Trait Groups.

The procedures for adapting the **Career Information System** to another system are divided into two segments. The first segment contains procedures for developing a basic adapted system, designed for processing single-job unbound materials. The second segment contains procedures for expanding this basic adapted system to encompass bound, audiovisual, and omnibus materials.

Installing the Basic Adapted System

Adapting an existing vertical filing system to the Worker Trait Group structure is similar to installing the basic system. The major difference is in the use of an alternate file code to identify the location of single-job unbound materials within the structure of the existing system. All the filing and indexing materials of the **Career Information System** are used. The materials are still coded and indexed by Worker Trait Groups. However, they are also given an alternate file code which identifies the location of the occupational resource in the other filing system. This alternate file code can be an abbreviation of the existing system's name combined with a file division number, or simply the number under which the material is filed. For example, the alternate file code for materials in division "001" of the Chronicle filing system could be "Chr. 001" or just "001." Users of the established filing system, such as Chronicle, should already be informed of the filing structure and where to locate materials.

Preparing Physical Components for an Adapted System

The physical components of the basic adapted system consist of the **File Content Notebook** and the Alphabetical Card File. Materials filed in an existing system can remain in their present storage component.

File Content Notebook. The **File Content Notebook** is developed following the instructions on page 9. The notebook is used to index all DOT Main Titles in the existing system to Career Areas — Worker Trait Groups. The second column of the notebook form is used to record the alternate file code.

Alphabetical Card File. To develop this component, follow the instructions on page 10. The Alphabetical Card File provides an alphabetical index for all occupational titles in the existing system. The DOT Main Title entry cards contain a blank for filling in the appropriate alternate file code.

Processing Material for an Adapted System

Materials filed within an existing system are processed by using approximately the same procedures described in "Installing the Basic System," pages 9-14. Each section or division of the existing file is processed separately, using the following defined procedures.

1. **Coding** — identifying the Area — WTG to which an occupational title belongs and marking the materials with coding information.

2. **Recording** — making an entry for the occupational title on the Area — WTG form in the **File Content Notebook.**

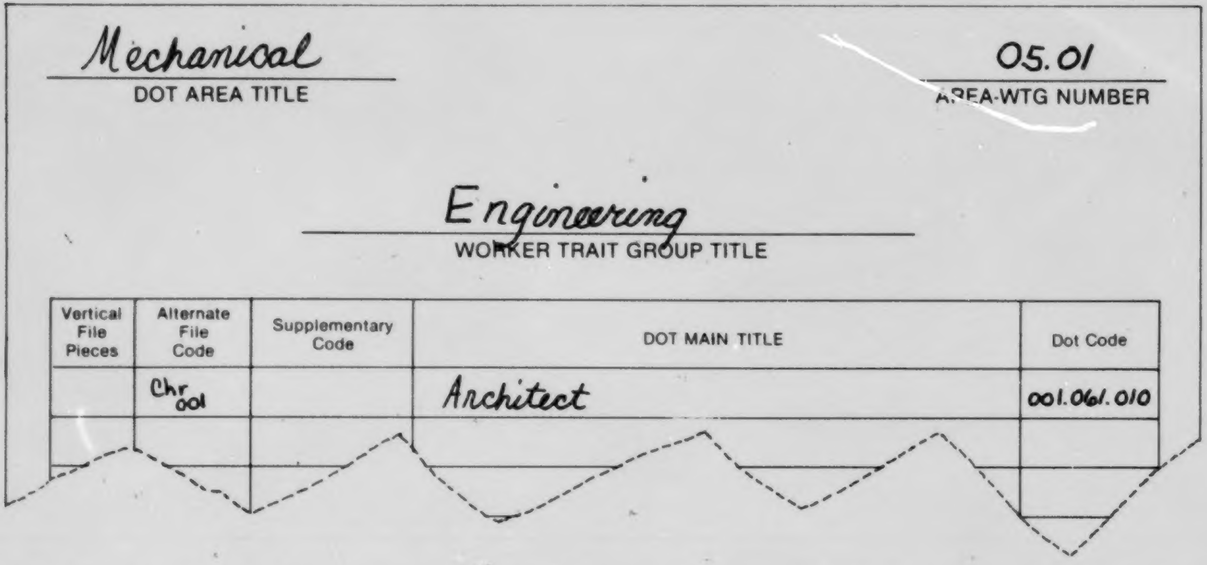
3. **Cataloging** — filling out the DOT Main Title entry cards and/or Alternate Title cards, as necessary, and placing them in the Alphabetical Card File.

4. **Filing** — returning the materials to the sections or divisions of the existing filing system.

Materials in the first section or division of the existing system are processed through all four procedures before proceeding to the second section or division. Process the materials according to the directions given for installing the basic system and to the following modifications.

Coding. Coding single-job materials filed in an existing system involves no modification in the basic system's procedure. The only variation is the **order** in which materials are processed: materials in the existing system are coded section by section.

Recording. To record single-job materials filed in an existing system, make entries for the DOT Main Titles in the **File Content Notebook.** Like the coding procedure, this is done for one section or division of the file at a time. After following the basic system's directions, enter the alternate file code in the second column of the notebook form, as shown in the following example.



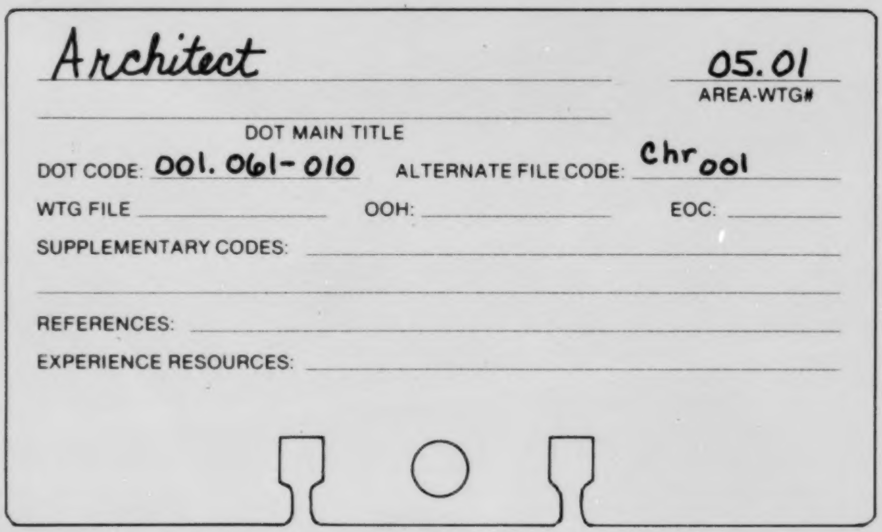
Mechanical
DOT AREA TITLE

05.01
AREA-WTG NUMBER

Engineering
WORKER TRAIT GROUP TITLE

Vertical File Pieces	Alternate File Code	Supplementary Code	DOT MAIN TITLE	Dot Code
	Chr 001		Architect	001.061.010

Cataloging. To catalog single-job unbound materials filed in an existing system, fill out entry cards for each new DOT Main Title and for any new Alternate Titles contained in each file section or division. After following the basic system's direction, enter the alternate file code in the appropriate blank on the DOT Main Title entry card, as shown in the following example.



Architect
DOT MAIN TITLE

05.01
AREA-WTG#

DOT CODE: 001. 061-010 ALTERNATE FILE CODE: Chr 001

WTG FILE ____ OOH: ____ EOC: ____

SUPPLEMENTARY CODES: ____

REFERENCES: ____

EXPERIENCE RESOURCES: ____

Filing. After the materials within each section or division of an existing file have been coded, recorded, and cataloged, refile them into their original section or division. If the original system uses an alphabetical arrangement, materials should be alphabetized by their DOT Main Title.

Expanding the Adpated System

Most occupational information filing systems have single-job briefs or pamphlets filed in a vertical file. However, some systems include audiovisual and omnibus materials and books. If these resources are organized into some type of system, they must be processed using the adapting procedures. Unorganized materials are processed using the procedures described in the section, "Expanding the System," pages 16-25. Expanding the adapted system involves the same processing procedures, the **File Content Notebook,** the Alphabetical Card File, and the alternate file code used to install the basic adapted system. However, some modifications to the processing procedures and to the **File Content Notebook** are necessary.

Preparing Adapted Physical Components

The physical components of the expanded basic adapted system are the same as those for the expanded basic system. A supplementary section is developed for the **File Content Notebook** in which to record bound and audiovisual materials as instructed on page 17. The entry cards of the Alphabetical Card File contain a space for the supplementary code to be recorded.

Processing Media Resources Into An Adapted System

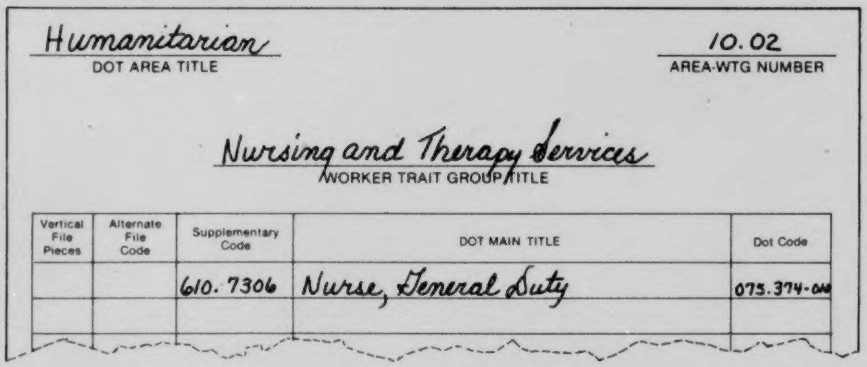
Media resources organized by an existing system are processed by using four procedures: coding, recording, cataloging, and filing. Process the following media resources into the expanded adapted system according to the directions given for expanding the basic system and these modifications.

- Single-Job Bound materials
- Single-Job Audiovisual materials
- Omnibus Unbound materials
- Omnibus Bound materials
- Omnibus Audiovisual materials

Coding. Follow the directions given for expanding the basic system to code these resources. No modification of the coding procedure is necessary.

Recording. Follow the instructions given for expanding the basic system to record these resources, but do not assign them a supplementary code. Instead, use the alternate file code which is already assigned to the materials, such as Dewey decimal numbers. (Dewey decimal numbers may be confused with DOT codes, as they both start with three digits and a decimal point. It is necessary to stress to the users of the system that DOT codes are recorded only in the column marked "DOT CODE.")

Record the alternate file code in the **File Content Notebook** in the supplementary code column on both the notebook form and the division form. For example, the book **So You Want To Be A Nurse** has the Dewey decimal classification 610.7306/N. This alternate file code is recorded in the supplementary code columns on both forms as shown in the following examples:

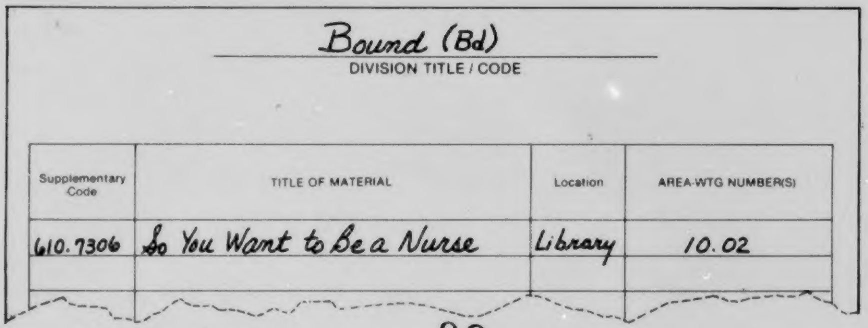


Humanitarian
DOT AREA TITLE

10.02
AREA-WTG NUMBER

Nursing and Therapy Services
WORKER TRAIT GROUP TITLE

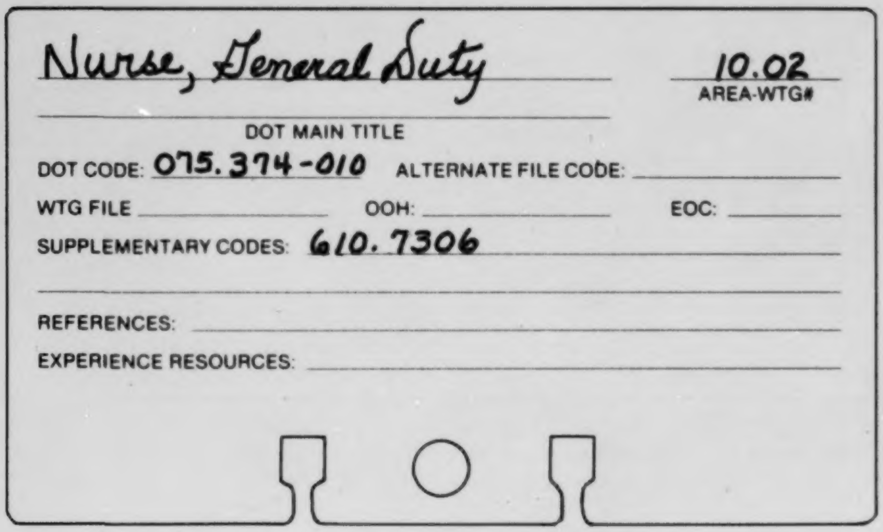
Vertical File Pieces	Alternate File Code	Supplementary Code	DOT MAIN TITLE	Dot Code
		610. 7306	Nurse, General Duty	075.374-010



Bound (Bd)
DIVISION TITLE / CODE

Supplementary Code	TITLE OF MATERIAL	Location	AREA-WTG NUMBER(S)
610.7306	So You Want to Be a Nurse	Library	10.02

Cataloging. Follow the instructions given for expanding the basic system to catalog these resources. However, when filling out the DOT Main Title entry card, enter the alternate file code assigned to the resource in the supplementary code blank, as shown in the following example. This should not be confused with the alternate file code blank.



Nurse, General Duty — 10.02 AREA-WTG#

DOT MAIN TITLE

DOT CODE: 075.374-010 ALTERNATE FILE CODE: ______

WTG FILE ______ OOH: ______ EOC: ______

SUPPLEMENTARY CODES: 610.7306

REFERENCES: ______

EXPERIENCE RESOURCES: ______

Filing (storing). After the coding, recording, and cataloging procedures have been followed, refile the materials into their original order in the existing system.

MATERIALS AND EQUIPMENT LIST

The following materials and equipment will be needed to install the Basic filing and indexing system of the **Career Information System** (CIS). These are not included in the CIS package.

- **Supplement to the Dictionary of Occupational Titles,** published by the U.S. Department of Labor
- Vertical file cabinet, letter size, two or more drawers
- 78 file dividers, letter size, 3 cut metal tabs
- Card file, rotary or standard, 3" × 5" card size, minimum capacity 2,500 cards
- 1,500 blank index cards, 3" × 5"
- Alphabetic dividers
- Career information resources

NOTE: Rotary files are equipped with blank cards and alphabetic dividers when purchased.

ATTACHMENT B

CAREER AREA — WORKER TRAIT GROUP LIST

If you wish to use these as file tab inserts, **Cut** on **SOLID** lines, **Fold** on **DOTTED** lines.

01 ARTISTIC

01.01 Literary Arts

01.02 Visual Arts

01.03 Performing Arts: Drama

01.04 Performing Arts: Music

01.05 Performing Arts: Dance

01.06 Technical Arts

01.07 Amusement

01.08 Modeling

02 SCIENTIFIC

02.01 Physical Sciences

02.02 Life Sciences

02.03 Medical Sciences

02.04 Laboratory Technology

03 NATURE

03.01 Managerial Work: Nature

03.02 General Supervision: Nature

03.03 Animal Training and Care

03.04 Elemental Work: Nature

04 AUTHORITY

04.01 Safety and Law Enforcement

04.02 Security Services

05 MECHANICAL

05.01 Engineering

05.02 Managerial Work: Mechanical

05.03 Engineering Technology

05.04 Air and Water Vehicle Operation

05.05 Craft Technology

05.06 Systems Operation

05.07 Quality Control

05.08 Land Vehicle Operation

05.09 Materials Control

05.10 Skilled Hand and Machine Work

05.11 Equipment Operation

05.12 Elemental Work: Mechanical

06 INDUSTRIAL

06.01 Production Technology

06.02 Production Work

06.03 Production Control

06.04 Elemental Work: Industrial

07 BUSINESS DETAIL

07.01 Administrative Detail

07.02 Mathematical Detail

07.03 Financial Detail

07.04 Information Processing · Speaking

07.05 Information Processing · Records

07.06 Clerical Machine Operation

07.07 Clerical Handling

08 PERSUASIVE

08.01 Sales Technology

08.02 General Sales

08.03 Vending

09 ACCOMMODATING

09.01 Hospitality Services

09.02 Barbering and Beauty Services

09.03 Passenger Services

09.04 Customer Services

09.05 Attendant Services

10 HUMANITARIAN

10.01 Social Services

10.02 Nursing and Therapy Services

10.03 Child and Adult Care

11 SOCIAL-BUSINESS

11.01 Mathematics and Statistics

11.02 Educational and Library Services

11.03 Social Research

11.04 Law

11.05 Business Administration

11.06 Finance

11.07 Services Administration

11.08 Communications

11.09 Promotion

11.10 Regulations Enforcement

11.11 Business Management

11.12 Contracts and Claims

12 PHYSICAL PERFORMING

12.01 Sports

12.02 Physical Feats

ATTACHMENT C

WORKER TRAIT GROUP

INDEX TO

COMMERCIAL BRIEFS

Brief Title DOT Title if different	Third Edition DOT Code — WTG #	Fourth Edition DOT Code Area — WTG #	
ABLE SEAMAN	(911.884 WTG 39)	911.364-010	05.12
ACCOUNTANT	(160.188 WTG 13)	160.167-010	11.06
ACCOUNTANT, COST	(160.188 WTG 13)	160.167-018	11.06
ACCOUNTING CLERK	(219.488 WTG 26)	216.482-010	07.02
ACTOR	(150.048 WTG 63)	150.047-010	01.03
(Actor-Actress) ACTOR	(150.048 WTG 63)	150.047-010	01.03
ACTUARY	(020.188 WTG 88)	020.167-010	11.01
(Administrative Manager) MANAGER, OFFICE	(169.168 WTG 10)	169.167-034	07.01
(Advertising Account Executive) ACCOUNT EXECUTIVE	(164.168 WTG 10)	164.167-010	11.09
(Advertising Copywriter) COPY WRITER	(132.088 WTG 112)	131.067-014	01.01
(Advertising-Space Salesman) SALES REPRESENTATIVE, ADVERTISING	(258.358 WTG 97)	254.357-014	08.01
(Aeronautical Draftsman) DRAFTER, AERONAUTICAL	(002.281 WTG 56)	002.261-010	05.03
(Aerospace Engineer) AERONAUTICAL ENGINEER	(002.081 WTG 53)	002.061-014	05.01
(Agricultural Commodity Grader) INSPECTOR, AGRICULTURAL COMMODITIES	(168.287 WTG 76)	168.287-010	11.10
AGRICULTURAL ENGINEER	(013.081 WTG 53)	013.061-010	05.01
AGRONOMIST	(040.081 WTG 87)	040.061-010	02.02
(Air Conditioning and Refrigeration Mechanic) REFRIGERATION MECHANIC	(637.281 WTG 37)	637.261-026	05.05
(Air-Conditioning Engineer) MECHANICAL ENGINEER	(007.081 WTG 53)	007.061-014	05.01
(Aircraft Assembler) ASSEMBLER, AIRCRAFT STRUCTURES AND SURFACES	(806.381 WTG 37)	806.381-026	06.01
(Aircraft Mechanic) AIRFRAME-AND-POWER-PLANT MECHANIC	(621.281 WTG 37)	621.281-014	05.05
(Aircraft and Engine Mechanic) AIRFRAME-AND-POWER PLANT MECHANIC	(621.281 WTG 37)	621.281-014	05.05
(Air Hammer Operator) CONSTRUCTION WORKER 2	(859.887 WTG 52)	869.687-026	05.12
(Airline Dispatcher) DISPATCHER	(912.168 WTG 17)	912.167-010	05.03
(Airline Pilot) AIRPLANE PILOT, COMMERCIAL	(196.283 WTG 77)	196.263-014	05.04
(Airline Steward/Stewardess AIRPLANE FLIGHT ATTENDANT	(352.878 WTG 105)	352.367-010	09.01
(Airline Ticket Agent) TICKET AGENT	(919.368 WTG 19)	238.367-026	07.03

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(Airplane Mechanic) AIRFRAME-AND-POWER-PLANT MECHANIC	(621.281 WTG 37)	621.281-014	05.05
AIRPLANE PILOT, COMMERCIAL	(196.283 WTG 77)	196.263-014	05.04
(Airplane Stewardess) AIRPLANE FLIGHT ATTENDANT	(352.878 WTG 105)	352.367-010	09.01
(Airport Manager) MANAGER, AIRPORT	(184.118 WTG 6)	184.117-026	11.05
(Airport Superintendent) MANAGER, AIRPORT	(184.118 WTG 6)	184.117-026	11.05
(Air-Traffic Controller) AIR-TRAFFIC-CONTROL SPECIALIST, TOWER	(193.168 WTG 17)	193.162-018	05.03
(Anesthetist) NURSE ANESTHETIST	(075.378 WTG 92)	075.371-010	10.02
(Animal Hospital Attendant) ANIMAL CARETAKER	(356.874 WTG 107)	410.674-010	03.02
(Animal Husbandman) ANIMAL SCIENTIST	(040.081 WTG 87)	040.061-014	02.02
(Animal Husbandry Specialist) ANIMAL SCIENTIST	(040.081 WTG 87)	040.061-014	02.02
ANIMAL KEEPER	(356.874 WTG 107)	412.674-010	03.03
(Announcer, Radio and Television) ANNOUNCER	(159.148 WTG 67)	159.147-010	01.03
ANTHROPOLOGIST	(055.088 WTG 31)	055.067-010	11.03
(Apartment Building Janitor) JANITOR	(382.884 WTG 39)	382.664-010	05.12
ARCHEOLOGIST	(055.088 WTG 31)	055.067-018	11.03
ARCHITECT	(001.081 WTG 53)	001.061-010	05.01
(Architect, Landscape) LANDSCAPE ARCHITECT	(019.081 WTG 53)	001.061-018	05.01
(Architect, Naval) ARCHITECT, MARINE	(001.081 WTG 53)	001.061-014	05.01
(Architectural Draftsman) DRAFTER, ARCHITECTURAL	(001.281 WTG 56)	001.261-010	05.03
ARCHIVIST	(101.168 WTG 10)	101.167-010	11.03
(Artist, Commercial Illustrating) ILLUSTRATOR	(141.081 WTG 4)	141.061-022	01.02
(Art Teacher, Elementary) TEACHER, ELEMENTARY SCHOOL	(092.228 WTG 45)	092.227-010	11.02
(Art Teacher, High School) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
(Asbestos and Insulating Worker) CONSTRUCTION WORKER I	(863.884 WTG 39)	869.664-014	05.10
(Assembler, Electronic Industry) ELECTRONICS ASSEMBLER	(726.781 WTG 38)	726.684-018	06.02
(Assembler, Electronics Manufacturing) ELECTRONICS ASSEMBLER	(726.884 WTG 39)	726.384-010	06.02
(Assessor) APPRAISER	(188.168 WTG 13)	188.167-010	11.06
ASTRONOMER	(021.088 WTG 88)	021.067-010	02.01
(Athlete) PROFESSIONAL ATHLETE	(153.348 WTG 68)	153.341-010	12.01
(Athlete, Professional) PROFESSIONAL ATHLETE	(153.348 WTG 68)	153.341-010	12.01

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(Athletic Coach) INSTRUCTOR, SPORTS	(099.228 WTG 47)	153.227-018	12.01
AUCTIONEER	(294.258 WTG 97)	294.257-010	08.02
AUDIOLOGIST	(079.108 WTG 90)	076.101-010	02.03
AUDITOR	(160.188 WTG 13)	160.162-014	11.06
(Auto-Body Designer) DRAFTER, AUTOMOTIVE DESIGN	(017.281 WTG 56)	017.281-022	05.03
(Auto Driving Instructor) INSTRUCTOR, DRIVING	(099.228 WTG 46)	099.2[illegible]10	09.03
(Automatic Bowling Machine Mechanic) PINSETTER MECHANIC, AUTOMATIC	(829.281 WTG 37)	638.261-022	05.10
(Automatic Washer Repairman) ELECTRICAL-APPLIANCE SERVICER	(827.281 WTG 37)	827.261-010	05.05
(Automatic Vending Routeman) COIN COLLECTOR	(292.483 WTG 98)	292.483-010	05.08
(Automobile-Body Repairman) AUTOMOBILE-BODY REPAIRER	(807.381 WTG 37)	807.381-010	05.05
(Automobile Parking Attendant) PARKING-LOT ATTENDANT	(915.878 WTG 105)	915.473-010	09.04
(Automobile Salesperson) SALESPERSON, AUTOMOBILES	(280.358 WTG 97)	273.353-010	08.02
(Automobile Service Station Salesman) AUTOMOBILE SERVICE STATION ATTENDANT	(915.867 WTG 103)	915.467-010	05.10
(Automotive Brake Specialist) BRAKE REPAIRER	(620.281 WTG 37)	620.281-026	05.10
(Automotive-Body Repairman) AUTOMOBILE-BODY REPAIRER	(807.381 WTG 37)	807.381-010	05.05
(Automotive Designer) DRAFTER, AUTOMOTIVE DESIGN	(017.281 WTG 56)	017.281-022	05.03
(Automotive Mechanic) AUTOMOBILE MECHANIC	(620.281 WTG 37)	620.261-010	05.05
(Automotive Painter) PAINTER, TRANSPORTATION VEHICLE	(845.781 WTG 38)	845.381-014	05.10
(Automotive Parts Counterman) SALESPERSON, PARTS	(289.358 WTG 97)	279.357-062	08.02
(Automotive Service Advisor) AUTOMOBILE-REPAIR SERVICE ESTIMATOR	(620.281 WTG 37)	620.261-018	05.07
(Auto Service Station Attendant) AUTOMOBILE-SERVICE STATION ATTENDANT	(915.867 WTG 103)	915.467-010	05.10
BAKER	(313.781 WTG 38)	313.381-010	05.10
BAKER	(526.781 WTG 38)	526.381-010	06.02
(Ballroom Dance Teacher) INSTRUCTOR, DANCING	(151.028 WTG 1)	151.027-014	01.05
(Bank Manager, Branch) MANAGER, FINANCIAL INSTITUTION	(186.118 WTG 6)	186.117-038	11.05
(Bank Teller) TELLER	(212.368 WTG 20)	211.362-022	07.02
BARBER	(330.371 WTG 101)	330.371-010	09.02
(Barber-Stylist) BARBER	(330.371 WTG 101)	330.371-010	09.02
(Beauty Operator) COSMETOLOGIST	(332.271 WTG 101)	332.271-010	09.02

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BEEKEEPER	(419.181 WTG 72)	413.161-010	03.01
(Bilingual Secretary) SECRETARY	(201.368 WTG 18)	201.362-030	07.01
BILLING-MACHINE OPERATOR	(214.488 WTG 26)	214.482-010	07.06
BIOCHEMIST	(041.081 WTG 87)	041.061-026	02.02
BIOLOGIST	(041.081 WTG 87)	041.061-030	02.02
(Biologist Assistant) BIOLOGICAL AID	(049.384 WTG 73)	049.384-010	02.04
BIOMEDICAL ENGINEER		019.061-010	02.02
BIOMEDICAL EQUIPMENT TECHNICIAN		019.261-010	02.04
BIOPHYSICIST	(041.081 WTG 87)	041.061-034	02.02
BLACKSMITH	(610.381 WTG 37)	610.381-010	05.05
BOILERMAKER I	(805.281 WTG 37)	805.261-014	05.05
BOOKBINDER	(977.884 WTG 39)	977.381-010	05.05
(Book Editor) EDITOR, BOOK	(132.068 WTG 111)	132.067-014	01.01
BOOKKEEPER I	(210.388 WTG 26)	210.382-014	07.02
BOOKKEEPING MACHINE OPERATOR I	(215.388 WTG 26)	210.382-026	07.06
BOOKKEEPING MACHINE OPERATOR II	(215.388 WTG 26)	210.382-026	07.06
(Bookshop and Bookstore Sales Clerk) SALESPERSON, BOOKS	(289.358 WTG 97)	277.357-034	08.02
(Border Patrolman) BORDER GUARD	(375.868 WTG 79)	375.363-010	04.02
BOTANIST	(041.081 WTG 87)	041.061-038	02.02
(Bowling Center Manager) MANAGER, RECREATION ESTABLISHMENT	(187.168 WTG 10)	187.117-042	11.11
(Bowling Machine Mechanic) PINSETTER MECHANIC, AUTOMATIC	(829.281 WTG 37)	638.261-022	05.10
(Boy Scout District Executive) DISTRICT ADVISER	(187.118 WTG 6)	187.117-022	11.05
(Brakeman) BRAKER, PASSENGER TRAIN	(910.364 WTG 110)	910.364-010	09.01
BRICKLAYER	(861.381 WTG 37)	861.381-014	05.05
(Bricklayer Helper) CONSTRUCTION WORKER 2	(861.887 WTG 52)	869.687-026	05.12
(Bridal Consultant) WEDDING CONSULTANT	(299.358 WTG 97)	299.357-018	08.02
(Building Contractor) CONTRACTOR	(182.168 WTG 10)	182.167-010	11.12
(Building Custodian) JANITOR	(382.884 WTG 39)	382.664-010	05.12
(Building Inspector) INSPECTOR, BUILDING	(168.168 WTG 74)	168.167-030	05.03
(Building Manager) SUPERINTENDENT, BUILDING	(187.168 WTG 10)	187.167-190	05.02
BULLDOZER OPERATOR 1	(850.883 WTG 83)	850.683-026	05.11
(Bus Boy) DINING-ROOM ATTENDANT	(311.878 WTG 105)	311.677-018	09.05
BUS DRIVER	(913.463 WTG 110)	913.463-010	09.03
BUSINESS REPRESENTATIVE, LABOR UNION	(187.118 WTG 6)	187.167-018	11.05

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(Business Teacher, High School) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
BUYER	(162.158 WTG 95)	162.157-018	08.01
CABINETMAKER	(660.280 WTG 80)	660.280-010	05.05
(Cafeteria Manager, Industrial) MANAGER, INDUSTRIAL CAFETERIA	(319.138 WTG 85)	319.137-018	11.11
CALCULATING-MACHINE OPERATOR	(216.488 WTG 26)	216.482-022	07.02
(Camera Repairman) CAMERA REPAIRER	(714.281 WTG 37)	714.281-014	05.05
(Camp Counselor) COUNSELOR, CAMP	(159.228 WTG 46)	159.124-010	09.01
CARPENTER	(860.381 WTG 37)	860.381-022	05.05
(Carpenter, Construction) CARPENTER	(860.381 WTG 37)	860.381-022	05.05
(Cartographer) DRAFTER, CARTOGRAPHIC	(017.281 WTG 56)	018.261-010	05.03
CARTOONIST	(144.081 WTG 4)	141.061-010	01.02
CASHIER 2	(211.468 WTG 21)	211.462-010	07.03
(Caterer) MANAGER, FOOD SERVICE	(187.168 WTG 10)	187.167-106	11.11
(Cattleman) LIVESTOCK RANCHER	(413.181 WTG 72)	410.161-018	03.01
CEMENT MASON	(844.884 WTG 39)	844.364-010	05.05
CERAMIC ENGINEER	(006.081 WTG 53)	006.061-014	05.01
(Certified Laboratory Assistant) MEDICAL-LABORATORY TECHNICIAN	(078.381 WTG 75)	078.381-014	02.04
(Chamber of Commerce Manager) EXECUTIVE VICE PRESIDENT, CHAMBER OF COMMERCE	(187.118 WTG 6)	187.117-030	11.05
CHAUFFER	(359.873 WTG 103)	359.673-010	09.03
CHEF	(313.131 WTG 33)	313.131-014	05.05
CHEMICAL ENGINEER	(008.081 WTG 53)	008.061-018	05.01
CHEMICAL-LABORATORY TECHNICIAN	(002.281 WTG 75)	022.261-010	02.04
(Chemical Technician) LABORATORY TESTER	(022.384 WTG 73)	029.261-010	02.04
CHEMIST		022.061-010	02.01
(Child Care Worker) ATTENDANT, CHILDREN'S INSTITUTION	(359.878 WTG 93)	359.677-010	10.03
(Child Day Care Worker) NURSERY SCHOOL ATTENDANT	(359.878 WTG 93)	359.677-018	10.03
(Chipper and Grinder) GRINDER-CHIPPER	(809.884 WTG 39)	809.684-026	06.04
CHIROPRACTOR	(079.108 WTG 90)	079.101-010	02.03
(Christian Education Director) DIRECTOR, RELIGIOUS EDUCATION	(129.108 WTG 32)	129.107-022	11.02
(City Manager) MANAGER, CITY	(188.118 WTG 6)	188.117-114	11.05
(City Planner) URBAN PLANNER	(199.168 WTG 6)	199.167-014	11.03
CIVIL ENGINEER	(005.081 WTG 53)	005.061-014	05.01

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CLAIM ADJUSTER	(241.168 WTG 74)	241.217-010	11.12
CLASSIFIED AD CLERK 2	(209.388 WTG 24)	247.387-022	07.05
(Clergyman) CLERGY MEMBER	(120.108 WTG 32)	120.007-010	10.01
(Clerk, General Office) ADMINISTRATIVE CLERK	(219.388 WTG 26)	219.362-010	07.01
(Coal Miner) MINER I	(939.281 WTG 37)	939.281-010	05.11
(College Teacher) FACULTY MEMBER, COLLEGE OR UNIVERSITY	(090.288 WTG 44)	090.227-010	11.02
(Commercial and Industrial Photographer) PHOTOGRAPHER, STILL	(143.062 WTG 3)	143.062-030	01.02
(Commercial Artist) ILLUSTRATOR	(141.081 WTG 4)	141.061-022	01.02
(Commercial Diver) DIVER	(899.281 WTG 37)	899.261-010	05.05
COMPARISON SHOPPER	(296.388 WTG 24)	296.367-014	08.01
COMPOSER	(152.088 WTG 100)	152.067-014	01.04
COMPOSITOR	(973.381 WTG 37)	973.381-010	05.05
(Computer Service Technician) ELECTRONICS MECHANIC	(828.281 WTG 37)	828.281-010	05.05
CONDUCTOR, PASSENGER CAR	(198.168 WTG 10)	198.167-010	11.11
(Conservation Officer) FISH AND GAME WARDEN	(379.168 WTG 74)	379.167-010	04.01
CONSTRUCTION EQUIPMENT MECHANIC	(620.281 WTG 37)	620.261-022	05.05
CONSTRUCTION INSPECTOR	(182.287 WTG 76)	182.267-010	05.03
(Construction Ironworker) STRUCTURAL-STEEL WORKER	(801.781 WTG 38)	801.361-014	05.05
(Construction Machinery Operator) OPERATING ENGINEER	(859.883 WTG 83)	859.683-010	05.11
(Construction Superintendent) SUPERINTENDENT, CONSTRUCTION	(182.168 WTG 10)	182.167-026	05.02
(Consumer Safety Officer) FOOD AND DRUG INSPECTOR	(168.287 WTG 76)	168.267-042	11.10
(Cook, Domestic Service) COOK	(305.281 WTG 36)	305.281-010	05.10
(Cooperative Extension Service Worker) COUNTY-AGRICULTURAL AGENT	(096.128 WTG 42)	096.127-010	11.02
COPY WRITER	(132.088 WTG 112)	131.067-014	01.01
COREMAKER	(518.381 WTG 37)	518.381-014	06.01
(Correctional Officer) CORRECTION OFFICER	(372.868 WTG 79)	372.667-018	04.02
CORRESPONDENCE CLERK	(204.288 WTG 15)	209.262-010	07.01
COSMETOLOGIST	(332.271 WTG 101)	332.271-010	09.02
(Cost Accountant) ACCOUNTANT, COST	(160.188 WTG 13)	160.167-018	11.06
(Counselor, High School) COUNSELOR	(045.108 WTG 32)	045.107-010	10.01
(Counselor, Vocational Rehabilitation) COUNSELOR	(045.108 WTG 32)	045.107-010	10.01

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(Counterman, Cafeteria) COUNTER ATTENDANT, CAFETERIA	(311.878 WTG 105)	311.677-014	09.05
COUNTY AGRICULTURAL AGENT	(096.128 WTG 42)	096.127-010	11.02
COURT CLERK	(249.368 WTG 16)	243.362-010	07.01
(Court Reporter) SHORTHAND REPORTER	(202.388 WTG 25)	202.362-010	07.05
CREDIT ANALYST	(191.268 WTG 74)	191.267-014	11.06
(Credit Collector) COLLECTOR	(240.368 WTG 16)	241.367-010	07.03
(Credit Manager) MANAGER, CREDIT AND COLLECTION	(168.168 WTG 10)	168.167-054	07.01
(Criminologist) SOCIOLOGIST	(054.088 WTG 31)	054.067-014	11.03
(Crop Scientist) AGRONOMIST	(040.081 WTG 87)	040.061-010	02.02
CURATOR	(102.118 WTG 6)	102.017.010	11.07
(Custodian) JANITOR	(382.884 WTG 39)	382.664-010	05.12
CUSTOMS INSPECTOR	(168.168 WTG 74)	168.267-022	11.10
(Customs Worker) CUSTOMS INSPECTOR	(168.168 WTG 74)	168.267-022	11.10
(Cylinder-Press Man) CYLINDER-PRESS OPERATOR	(651.782 WTG 82)	651.362-010	05.05
(Dairy Farmer) LIVESTOCK RANCHER	(411.181 WTG 72)	410.161-018	03.01
DAIRY-PROCESSING EQUIPMENT OPERATOR	(529.782 WTG 82)	529.382-018	06.02
DAIRY TECHNOLOGIST	(040.081 WTG 87)	040.061-022	02.02
DANCER	(151.048 WTG 66)	151.047-010	01.05
(Data-Processing Machine Operator) COMPUTER OPERATOR	(213.382 WTG 23)	213.362-010	07.06
(Data-Processing Machine Serviceman) ELECTRONICS MECHANIC	(828.281 WTG 37)	828.281-010	05.05
(Data Processing Manager) MANAGER, ELECTRONIC DATA PROCESSING	(169.168 WTG 10)	169.167-030	11.01
DATA TYPIST	(213.588 WTG 28)	203.582-022	07.06
(Dean of Women) DEAN OF STUDENTS 1	(090.118 WTG 6)	090.117-018	11.02
(Delivery Route Salesman) DRIVER, SALES ROUTE	(292.358 WTG 97)	292.353-010	08.02
DENTAL ASSISTANT	(079.378 WTG 92)	079.371-010	10.03
DENTAL HYGIENIST	(078.368 WTG 92)	078.361-010	10.02
DENTAL LABORATORY TECHNICIAN	(712.381 WTG 37)	712.381-018	05.05
DENTIST	(072.108 WTG 90)	072.101-010	02.03
(Department Manager, Retail Trade) MANAGER, DEPARTMENT	(299.138 WTG 9)	299.137-010	11.11
DERMATOLOGIST	(070.108 WTG 90)	070.101-018	02.03
(Designer, Fabric) CLOTH DESIGNER	(142.081 WTG 4)	142.061-014	01.02
(Designer, Woman's Clothing) CLOTHES DESIGNER	(142.081 WTG 4)	142.061-018	01.02

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DETECTIVE	(375.268 WTG 74)	375.267-010	04.01
(Detective, Police) DETECTIVE	(375.268 WTG 74)	375.267-010	04.01
DEVELOPER	(976.381 WTG 37)	976.681-010	05.10
(Die Maker, Machine Shop) DIEMAKER, BENCH, STAMPING	(601.281 WTG 37)	601.281-010	05.05
(Diesel-Engine Technician) DIESEL-ENGINE TESTER	(625.281 WTG 37)	625.261-010	06.01
DIESEL MECHANIC	(625.281 WTG 37)	625.281-010	05.05
(Dietitian) DIETITIAN, CLINICAL	(077.168 WTG 10)	077.127-014	05.05
DIRECTOR, PROGRAM	(184.168 WTG 10)	184.167-030	11.05
DIRECTOR, RELIGIOUS EDUCATION	(129.108 WTG 32)	129.107-022	11.02
DISK JOCKEY	(159.148 WTG 67)	159.147-014	01.03
DISPATCHER	(912.168 WTG 17)	912.167-010	05.03
(Display Man) DISPLAYER, MERCHANDISE	(298.081 WTG 4)	298.081-010	01.02
(Display Worker) DISPLAYER, MERCHANDISE	(298.081 WTG 4)	298.081-010	01.02
DIVER	(899.281 WTG 37)	899.261-010	05.05
(Diver, Commercial) DIVER	(899.281 WTG 37)	899.261-010	05.05
(Doorman) DOORKEEPER	(324.878 WTG 106)	324.677-014	09.05
DRAFTER, AERONAUTICAL		002.261-010	05.03
DRAFTER, ARCHITECTURAL		001.261-010	05.03
(Draftsman, Mechanical) DRAFTER, MECHANICAL	(007.281 WTG 56)	007.281-010	05.03
(Dramaticist) PLAYWRIGHT	(131.088 WTG 112)	131.067-038	01.01
(Drapery Seamstress) DRAPERY OPERATOR	(787.782 WTG 82)	787.682-018	06.02
DRESSMAKER	(785.361 WTG 35)	785.361-010	05.05
(Driver, Heavy-Truck) TRUCK DRIVER, HEAVY	(905.882 WTG 83)	905.663-014	05.08
(Driving Instructor) INSTRUCTOR, DRIVING	(099.228 WTG 46)	099.223-010	09.03
(Drugstore Clerk) SALES CLERK	(290.478 WTG 102)	290.477-014	09.04
(Drugstore Salesperson) SALESPERSON, GENERAL MERCHANDISE	(289.458 WTG 97)	279.357-054	08.02
(Drycleaner Spotter) SPOTTER	(362.381 WTG 37)	362.381-010	06.02
ECONOMIST	(050.088 WTG 31)	050.067-010	11.03
EDITORIAL ASSISTANT	(132.288 WTG 114)	132.267-014	11.08
EDITOR, NEWSPAPER	(132.018 WTG 111)	132.017-014	11.08
(Electrical Appliance Serviceman) ELECTRICAL APPLIANCE SERVICER	(827.281 WTG 37)	827.261-010	05.05
ELECTRICAL ENGINEER	(003.081 WTG 53)	003.061-010	05.01

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(Electrical Repairman) ELECTRICAL REPAIRER	(829.281 WTG 37)	829.281-018	05.05
ELECTRICAL TECHNICIAN	(003.181 WTG 57)	003.161-010	05.01
ELECTRICIAN	(824.281 WTG 37)	824.261-010	05.05
(Electrician, Construction) ELECTRICIAN	(824.281 WTG 37)	824.261-010	05.05
(Electrician, Maintenance) ELECTRICAL REPAIRER	(829.281 WTG 37)	829.281-014	05.05
ELECTROCARDIOGRAPH TECHNICIAN	(078.368 WTG 92)	078.362-018	10.03
(Electroencephalograph Technician) ELECTROENCEPHALOGRAPH TECHNOLOGIST	(078.368 WTG 92)	078.362-022	10.03
ELECTROLOGIST	(339.371 WTG 101)	339.371-010	09.05
(Electronics System Tester) ELECTRONICS TESTER I	(729.381 WTG 37)	726.281-014	06.01
ELECTRONICS TECHNICIAN	(003.181 WTG 57)	003.161-014	05.01
(Electronic Technician) ELECTRONICS TECHNICIAN	(003.181 WTG 57)	003.161-014	05.01
(Electroplater) PLATER	(500.380 WTG 80)	500.380-010	06.02
ELECTROTYPER	(974.381 WTG 37)	974.381-010	05.05
(Elementary School Teacher) TEACHER, ELEMENTARY SCHOOL	(092.228 WTG 45)	092.227-010	11.02
ELEVATOR CONSTRUCTOR	(825.381 WTG 37)	825.361-010	05.05
EMERGENCY MEDICAL TECHNICIAN		079.374-010	10.02
EMPLOYMENT INTERVIEWER	(166.268 WTG 12)	166.267-010	11.03
(Employment Service Interviewer) EMPLOYMENT INTERVIEWER	(166.268 WTG 12)	166.267-010	11.03
(Employment Supervisor) MANAGER, EMPLOYMENT	(166.168 WTG 10)	166.167-030	11.05
(English Teacher, High School) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
ENTOMOLOGIST	(041.081 WTG 87)	041.061-046	02.02
EXECUTIVE HOUSEKEEPER	(187.168 WTG 10)	187.167-046	11.11
(Executive Secretary) ADMINISTRATIVE SECRETARY	(169.168 WTG 10)	169.167-014	07.01
(Extension Home Economist) COUNTY HOME-DEMONSTRATION AGENT	(096.128 WTG 42)	096.121-010	10.02
EXTERMINATOR	(389.884 WTG 39)	389.684-010	05.10
FACULTY MEMBER, COLLEGE OR UNIVERSITY	(090.228 WTG 44)	090.227-010	11.02
FALLER 1	(940.884 WTG 39)	454.384-010	03.04
FARM EQUIPMENT MECHANIC 1	(624.281 WTG 37)	624.281-010	05.05
(Farm Equipment and Supplies Salesperson) SALES REPRESENTATIVE, FARM AND GARDEN EQUIPMENT AND SUPPLIES	(277.358 WTG 97)	272.357-014	08.02
(Farmer, Cattle) LIVESTOCK RANCHER	(413.181 WTG 72)	410.161-018	03.01
(Farmer, Dairy) LIVESTOCK RANCER	(411.181 WTG 72)	410.161-018	03.01
(Farmer, Fruit) FARMER TREE-FRUIT AND NUT CROPS	(403.181 WTG 72)	403.161-010	03.01

Brief Title DOT Title if different	Third Edition DOT Code — WTG #	Fourth Edition DOT Code	Area — WTG #
FARMER, GENERAL	(421.181 WTG 72)	421.161-010	03.01
(Farmer, Poultry) POULTRY FARMER	(412.181 WTG 72)	411.161-018	03.01
(Farmer, Truck) FARMER, VEGETABLE	(403.181 WTG 72)	402.161-010	03.01
(Farm Manager) GENERAL MANAGER, FARM	(409.168 WTG 10)	180.167-018	03.01
FASHION COORDINATOR	(185.158 WTG 95)	185.157-010	11.09
(Fashion Designer) CLOTHES DESIGNER	(142.081 WTG 4)	142.061-018	01.02
(Fashion Illustrator) FASHION ARTIST	(141.081 WTG 4)	141.061-014	01.02
(FBI Agent) SPECIAL AGENT	(375.168 WTG 74)	168.267-034	04.01
(FBI Special Agent) INVESTIGATOR	(375.168 WTG 74)	168.267-062	11.10
FILE CLERK I	(206.388 WTG 24)	206.362-010	07.07
(Film Editor) EDITOR, FILM	(962.288 WTG 114)	962.264-010	01.01
(Financial Aids Administrator) FINANCIAL-AIDS OFFICER	(090.118 WTG 6)	090.117-030	11.02
FINGERPRINT CLASSIFIER	(375.388 WTG 24)	375.387-010	02.04
(Fire-Extinguisher Serviceman) FIRE-EXTINGUISHER REPAIRER	(709.884 WTG 39)	709.384-010	05.10
FIRE FIGHTER	(378.884 WTG 39)	373.364-010	04.02
FIRE PROTECTION ENGINEER	(012.188 WTG 59)	012.167-026	05.01
(Fisheries Scientist) MANAGER, FISH HATCHERY	(041.168 WTG 55)	180.167-030	03.01
(Flight Attendant) AIRPLANE FLIGHT ATTENDANT	(352.878 WTG 105)	352.367-010	09.01
FLIGHT ENGINEER	(621.281 WTG 37)	621.261-018	05.03
(Floor Covering Installer) FLOOR LAYER	(864.781 WTG 38)	864.481-010	05.10
(Floor Covering Installer, Resilient) FLOOR LAYER	(864.781 WTG 38)	864.481-010	05.10
FLORAL DESIGNER	(142.081 WTG 4)	142.081-010	01.02
(Florist) FLORAL DESIGNER	(142.081 WTG 4)	142.081-010	01.02
FOOD AND DRUG INSPECTOR	(168.287 WTG 76)	168.267-042	11.10
(Food Scientist) CHEMIST, FOOD	(022.081 WTG 87)	022.061-014	02.02
FOOD-SERVICE SUPERVISOR	(319.138 WTG 85)	319.137-010	09.05
(Food Store Checker) CASHIER-CHECKER	(299.468 WTG 21)	211.462-014	07.03
FOOD TECHNOLOGIST		041.081-010	02.02
(Foreign Language Teacher, High School) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
FOREIGN-SERVICE OFFICER	(188.118 WTG 6)	188.117-106	11.09
(Foreign-Service Secretary) SECRETARY	(201.368 WTG 18)	201.362-030	07.01
(Foreign Service Worker) FOREIGN-SERVICE OFFICER	(188.118 WTG 6)	188.117-106	11.09

Brief Title DOT Title if different	Third Edition DOT Code — WTG #	Fourth Edition DOT Code	Area — WTG #
FORESTER	(040.081 WTG 87)	040.061-034	03.01
(Forest Technician) FORESTER AID	(441.384 WTG 73)	452.364-010	03.01
(Free Lance Writer) WRITER, PROSE, FICTION AND NONFICTION	(130.088 WTG 112)	131.067-046	01.01
FREIGHT-TRAFFIC CONSULTANT	(184.268 WTG 11)	184.267-010	11.05
(Fruit Farmer) FARMER, TREE-FRUIT AND NUT CROPS	(404.181 WTG 72)	403.161-010	03.01
(Fund Raiser) DIRECTOR, FUND RAISING	(161.118 WTG 6)	165.117-010	11.09
(Funeral Director) DIRECTOR, FUNERAL	(187.168 WTG 10)	187.167-030	11.11
FUR FARMER	(419.181 WTG 72)	410.161-014	03.01
(Furnance Installer and Repairman) FURNANCE INSTALLER AND REPAIRER, HOT AIR	(869.281 WTG 37)	869.281-010	05.05
FURNITURE FINISHER	(763.381 WTG 37)	763.381-010	05.05
(Furniture Mover) VAN-DRIVER HELPER	(909.887 WTG 52)	905.687-014	05.12
FURNITURE UPHOLSTERER	(780.381 WTG 37)	780.381-018	05.05
(Gardener and Groundkeeper) GROUNDS KEEPER, INDUSTRIAL-COMMERCIAL	(407.884 WTG 39)	406.684-014	03.04
(Garment Cutter) CUTTER, MACHINE I	(781.884 WTG 39)	781.684-014	06.02
(Gas Appliance Service Worker) GAS APPLIANCE SERVICER	(637.281 WTG 37)	637.261-018	05.10
(General Merchandise Sales Clerk) (SALESPERSON, GENERAL MERCHANDISE	(289.458 WTG 97)	279.357-054	08.02
GENETICIST	(041.081 WTG 87)	041.061-054	02.02
GEOGRAPHER	(029.088 WTG 88)	029.067-010	02.01
GEOLOGIST	(024.081 WTG 87)	024.061-018	02.01
GEOPHYSICIST	(024.081 WTG 87)	024.061-030	02.01
(Girl Scout Executive Staff Worker) DISTRICT ADVISOR	(187.118 WTG 6)	187.117-022	11.05
GLAZIER	(865.781 WTG 38)	865.381-014	05.10
(Greenhouse Worker) HORTICULTURAL WORKER 1	(406.887 WTG 52)	405.684-014	03.04
(Grocery Checker) CASHIER-CHECKER	(299.468 WTG 21)	211.462-014	07.03
(Guard) GUARD, SECURITY	(372.868 WTG 79)	372.667-034	04.02
(Guidance Counselor) COUNSELOR	(045.108 WTG 32)	045.107-010	10.01
GUNSMITH	(632.281 WTG 37)	632.281-010	05.05
(Hand Composition) COMPOSITOR	(973.381 WTG 37)	973.381-010	05.05
HARBOR MASTER	(375.168 WTG 6)	375.167-026	04.01
HEALTH PHYSICIST	(079.021 WTG 86)	079.021-010	05.01

Brief Title DOT Title if different	Third Edition DOT Code — WTG #	Fourth Edition DOT Code Area — WTG #	
(Health Physics Technician) RADIATION MONITOR	(199.187 WTG 76)	199.167-010	05.03
(Health Services Librarian) LIBRARIAN, SPECIAL LIBRARY	(100.168 WTG 10)	100.167-026	11.02
HEAT TREATER 2	(504.782 WTG 82)	504.682-018	06.02
HELICOPTER PILOT	(196.283 WTG 77)	196.263-038	05.04
(High School Teacher) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
(Highway Engineer) TRANSPORTATION ENGINEER	(005.081 WTG 53)	005.061-038	05.01
(Histologist) HISTOPATHOLOGIST	(041.181 WTG 75)	041.061-054	02.02
(Histology Technician) TISSUE TECHNOLOGIST	(078.381 WTG 75)	078.361-030	02.04
HISTORIAN	(052.088 WTG 31)	052.067-022	11.03
(Home Appliance Serviceman) ELECTRICAL-APPLIANCE SERVICER	(827.281 WTG 37)	827.261-010	05.05
(Home Economics Teacher) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
HOME ECONOMIST	(096.128 WTG 42)	096.121-014	11.02
(Home Economist, Extension) COUNTRY HOME-DEMONSTRATION AGENT	(096.128 WTG 42)	096.121-010	10.02
(Homemaker-Home Health Aide) HOME ATTENDANT	(354.878 WTG 93)	354.377-014	10.03
HORTICULTURIST	(040.081 WTG 87)	040.061-038	02.02
(Hospital Administrator) ADMINISTRATOR, HOSPITAL	(187.118 WTG 6)	187.117-010	11.07
(Hospital Admitting Officer) ADMITTING OFFICER I	(237.368 WTG 16)	205.137-010	07.04
(Hotel and Motel Clerk) HOTEL CLERK	(242.368 WTG 19)	238.362-010	07.04
(Hotel/Motel Maid) CLEANER, HOUSEKEEPING	(323.887 WTG 52)	323.687-014	05.12
(Hotel and Motel Manager) MANAGER, HOTEL OR MOTEL	(187.118 WTG 6)	187.117-038	11.11
(Hotel Bellman) BELLHOP	(324.878 WTG 105)	324.667-010	09.05
HOUSE BUILDER	(869.281 WTG 37)	869.281-014	05.05
(House to House Salesperson) SALES REPRESENTATIVE, DOOR-TO-DOOR	(289.358 WTG 97)	291.357-010	08.02
(Hunting and Fishing Guide) GUIDE, HUNTING AND FISHING	(452.868 WTG 104)	353.161-010	12.02
(Ichthyologist) ZOOLOGIST	041.081 WTG 87)	041.061-090	02.02
ILLUMINATING ENGINEER	(003.081 WTG 53)	003.061-046	05.01
(Illustrator, Fashion) FASHION ARTIST	(141.081 WTG 4)	141.061-014	01.02
(Illustrator, Medical) ILLUSTRATOR, MEDICAL AND SCIENTIFIC	(141.081 WTG 4)	141.061-026	01.02
(Illustrator, Technical) TECHNICAL ILLUSTRATOR	(017.281 WTG 56)	017.281-034	05.03

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(Industrial and Labor Relations Director) DIRECTOR, INDUSTRIAL RELATIONS	(166.118 WTG 6)	166.117-010	11.05
INDUSTRIAL DESIGNER	(142.081 WTG 4)	142.061-026	01.02
INDUSTRIAL ENGINEER	(012.188 WTG 59)	012.167-030	05.01
INDUSTRIAL ENGINEERING TECHNICIAN	(012.288 WTG 59)	012.267-010	05.03
INDUSTRIAL HYGIENIST	(079.188 WTG 59)	079.161-010	11.10
(Industrial Machinery Mechanic) MACHINE REPAIRER, MAINTENANCE	(626.281 WTG 37)	626.281-010	05.05
(Industrial Machinery Repairman) MACHINE REPAIRER, MAINTENANCE	(626.281 WTG 37)	626.281-010	05.05
INDUSTRIAL-TRUCK OPERATOR	(922.883 WTG 83)	921.683-050	06.04
INFORMATION CLERK	(237.368 WTG 16)	237.367-022	07.04
(Inhalation Therapist) RESPIRATORY THERAPIST	(079.368 WTG 92)	079.361-010	10.02
(Instructor, Industrial) TEACHER, INDUSTRIAL ARTS	(091.228 WTG 44)	091.221-010	11.02
INSTRUCTOR, PHYSICAL EDUCATION	(153.228 WTG 47)	099.224-010	11.02
INSTRUCTOR, VOCATIONAL TRAINING	(097.228 WTG 42)	097.227-014	11.02
(Instrumental Music Teacher) TEACHER, MUSIC	(152.028 WTG 1)	152.021-010	01.04
INSTRUMENTATION TECHNICIAN	(003.281 WTG 57)	003.261-010	05.01
INSTRUMENT MAKER	(600.280 WTG 80)	600.280-010	05.05
(Instrument Maker II) INSTRUMENT MAKER	(600.280 WTG 80)	600.280-010	05.05
(Instrument Repairers) INSTRUMENT MECHANIC	(710.281 WTG 37)	710.281-026	05.05
(Instrument Repairman) INSTRUMENT MECHANIC	(710.281 WTG 37)	710.281-026	05.05
(Insulating Worker) CONSTRUCTION WORKER 1	(863.884 WTG 39)	869.664-014	05.10
(Insurance Adjuster) CLAIM ADJUSTER	(241.168 WTG 74)	241.217-010	11.12
(Insurance Agent) SALES AGENT, INSURANCE	(250.258 WTG 97)	250.257-010	08.01
(Insurance Agent, Life) SALES AGENT, INSURANCE	(250.258 WTG 97)	250.257-010	08.01
(Insurance Agent, Property and Liability) SALES AGENT, INSURANCE	(250.258 WTG 97)	250.257-010	08.01
INTERIOR DESIGNER	(142.051 WTG 2)	142.051-014	01.02
(Interior Designer, and Decorator) INTERIOR DESIGNER	(142.051 WTG 2)	142.051-014	01.02
(Internal Revenue Agent) REVENUE AGENT	(188.168 WTG 10)	160.167-050	11.06
INTERPRETER	(137.268 WTG 67)	137.267-010	11.08
JANITOR	(382.884 WTG 39)	382.664-010	05.12
JEWELER	(700.281 WTG 37)	700.281-010	01.06
(Jewelry and Flatware Designer) INDUSTRIAL DESIGNER	(142.081 WTG 4)	142.061-026	01.02

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JOB ANALYST	(166.088 WTG 31)	166.267-018	11.03
(Joint Financing Director) DIRECTOR, FUND RAISING	(161.118 WTG 6)	165.117-010	11.09
JUDGE	(111.108 WTG 78)	111.107-010	11.04
KEYPUNCH OPERATOR	(213.582 WTG 23)	203.582-030	07.06
(Kindergarten Teacher) TEACHER, KINDERGARTEN	(092.228 WTG 45)	092.227-014	11.02
(Labor Arbitrator) CONCILIATOR	(169.118 WTG 6)	169.207-010	11.04
LABORATORY TESTER	(029.281 WTG 75)	029.261-010	02.04
LANDSCAPE ARCHITECT	(019.081 WTG 53)	001.061-018	05.01
LANDSCAPE GARDENER	(407.181 WTG 72)	408.161-010	03.01
(Landscape Maintenance Superintendent) GREENSKEEPER I	(407.137 WTG 33)	406.137-010	03.04
(Lathe Operator, Automatic) LATHE OPERATOR, PRODUCTION	(604.885 WTG 84)	604.685-026	06.04
LATHER	(842.781 WTG 38)	842.361-010	05.10
LAWYER	(110.108 WTG 78)	110.107-010	11.04
(Layout Artist/Man) GRAPHIC DESIGNER	(141.081 WTG 4)	141.061-018	01.02
(Layout Man) LAYOUT WORKER	(600.381 WTG 37)	600.281-018	05.05
LEATHER WORKER	(789.884 WTG 39)	783.684-026	06.02
LEGAL SECRETARY	(201.368 WTG 18)	201.362-010	07.01
(Letter Carrier) MAIL CARRIER	(233.388 WTG 24)	230.367-010	07.05
(Lexicographer) EDITOR, DICTIONARY	(132.088 WTG 112)	132.067-018	11.08
LIBRARIAN	(100.168 WTG 10)	100.127-014	11.02
(Librarian, Children's) CHILDREN'S LIBRARIAN	(100.168 WTG 10)	100.167-018	11.02
(Librarian, High School) LIBRARIAN	(100.168 WTG 10)	100.127-014	11.02
(Librarian, Music) MUSIC LIBRARIAN	(100.388 WTG 24)	100.367-022	11.02
(Librarian, Special) LIBRARIAN, SPECIAL LIBRARY	(100.168 WTG 10)	100.167-026	11.02
LIBRARIAN, SPECIAL COLLECTIONS	(100.168 WTG 10)	100.267-014	11.02
LIBRARY ASSISTANT	(249.368 WTG 16)	249.367-046	11.02
(Library Media Specialist) MEDIA SPECIALIST, SCHOOL LIBRARY		100.167-030	11.02
(Library Technical Assistant) LIBRARY ASSISTANT	(249.368 WTG 16)	249.367-046	11.02
(Licensed Practical Nurse) NURSE, LICENSED PRACTICAL	(079.378 WTG 92)	079.374-014	10.02

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(Life Insurance Agent) SALES AGENT, INSURANCE	(250.258 WTG 97)	250.257-010	08.01
(Life Underwriter) SALES AGENT, INSURANCE	(250.258 WTG 97)	250.257-010	08.01
(Lineman) LINE ERECTOR	(821.381 WTG 37)	821.361-018	05.05
LINOTYPE OPERATOR	(650.582 WTG 23)	650.582-010	07.06
LITERARY AGENT	(191.118 WTG 7)	191.117-034	11.12
(Literary Writer) WRITER, PROSE, FICTION AND NONFICTION	(130.088 WTG 112)	131.067-046	01.01
LITHOGRAPHIC PLATE MAKER	(972.381 WTG 37)	972.381-010	01.06
LOAN OFFICER	(186.288 WTG 13)	186.267-018	11.06
(Local Bus Driver) BUS DRIVER	(913.463 WTG 110)	913.463.010	09.03
LOCKSMITH	(709.281 WTG 37)	709.281-010	05.05
LOCOMOTIVE ENGINEER	(910.383 WTG 77)	910.363-014	05.08
(Logger) LOGGER, ALL-ROUND	(940.884 WTG 39)	454.684-018	03.04
(Machinery Repairman Maintenance) MACHINE REPAIRER, MAINTENANCE	(626.281 WTG 37)	626.281-010	05.05
(Machine Tender, Production) PRODUCTION-MACHINE TENDER	(609.885 WTG 84)	609.685.018	06.04
(Machine-Tool Operator) PRODUCTION-MACHINE TENDER	(609.885 WTG 84)	609.685-018	06.04
MACHINIST	(600.280 WTG 80)	600.280-022	05.05
(Machinist, All-Round) MACHINIST	(600.280 WTG 80)	600.280-022	05.05
(Machinist I) MACHINIST	(600.280 WTG 80)	600.280-022	05.05
MAIL CARRIER	(233.388 WTG 24)	230.367-010	07.05
MAIL CLERK	(231.588 WTG 29)	209.587-026	07.05
(Maintenance Electrician) ELECTRICAL REPAIRER	(829.281 WTG 37)	829.281-014	05.05
(Male Secretary) SECRETARY	(201.368 WTG 18)	201.362-030	07.01
MANAGEMENT TRAINEE	(189.168 WTG 10)	189.167-018	11.05
(Manager, Bowling Center) MANAGER, RECREATION ESTABLISHMENT	(187.168 WTG 10)	187.117-042	11.11
MANAGER, TRAFFIC	(184.168 WTG 10)	184.167-094	11.05
MANICURIST	(331.878 WTG 105)	331.674-010	09.05
MANUFACTURERS' REPRESENTATIVE	(289.158 WTG 95)	279.157-010	08.02
(Marine Engineer) ENGINEER	(197.130 WTG 33)	197.130-010	05.06
(Marine Mechanic and Repairman) MACHINIST, MARINE ENGINE	(623.281 WTG 37)	623.281-026	05.05
(Marketing Researcher) MARKET-RESEARCH ANALYST I	(050.088 WTG 31)	050.067-014	11.06
(Marketing Research Worker) MARKET RESEARCH ANALYST I	(050.088 WTG 31)	050.067-014	11.06

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MATERIAL HANDLER	(929.887 WTG 52)	929.687-030	05.12
(Material Handling Coordinator) MATERIAL COORDINATOR	(221.168 WTG 17)	221.167-014	05.09
(Material Handling Engineer) MATERIAL COORDINATOR	(221.168 WTG 17)	221.167-014	05.09
MATHEMATICAL TECHNICIAN	(020.188 WTG 88)	020.016-010	11.01
MATHEMATICIAN	(020.088 WTG 88)	020.067-014	02.01
MEAT CUTTER	(316.884 WTG 39)	316.684-018	05.10
(Meat Cutter, Retail) MEAT CUTTER	(316.884 WTG 39)	316.684-018	05.10
(Meat Inspector) VETERINARY-MEAT INSPECTOR	(168.284 WTG 76)	073.264-010	02.03
(Meat and Poultry Food Inspector) VETERINARY-MEAT INSPECTOR	(168.284 WTG 76)	073.264-010	02.03
MECHANICAL ENGINEER	(007.081 WTG 53)	007.061-014	05.01
MECHANICAL-ENGINEERING TECHNICIAN	(007.181 WTG 57)	007.161-026	05.01
(Mechanic, Truck & Bus) AUTOMOBILE MECHANIC	(620.281 WTG 37)	620.261-010	05.05
MEDICAL ASSISTANT	(079.368 WTG 92)	079.367-010	10.03
(Medical Illustrator) ILLUSTRATOR, MEDICAL AND SCIENTIFIC	(141.081 WTG 4)	141.061-026	01.02
(Medical Laboratory Assistant) MEDICAL LABORATORY TECHNICIAN	(078.381 WTG 75)	078.381-014	02.04
(Medical Librarian) LIBRARIAN, SPECIAL LIBRARY	(100.168 WTG 10)	100.167-026	11.02
(Medical Office Assistant) SECRETARY	(201.362 WTG 18)	201.362-030	07.01
(Medical Record Administrator) MEDICAL RECORD TECHNICIAN	(100.388 WTG 24)	079.367-014	07.05
(Medical Record Librarian) MEDICAL RECORD TECHNICIAN	(100.388 WTG 24)	079.367-014	07.05
MEDICAL TECHNOLOGIST	(078.281 WTG 75)	078.361-014	02.04
MEMORIAL DESIGNER	(148.081 WTG 4)	142.061-030	01.02
(Merchandise Displayer) DISPLAYER, MERCHANDISE	(298.081 WTG 4)	298.081-010	01.02
(Messenger) DELIVERER, OUTSIDE	(230.878 WTG 106)	230.667-010	07.07
(Messenger and Officer Helper) DELIVERER, OUTSIDE	(230.878 WTG 106)	230.667-010	07.07
(Metal Patternmaker) PATTERNMAKER, METAL	(600.280 WTG 80)	600.280.050	05.05
(Meteorological Technician) WEATHER OBSERVER	(025.288 WTG 60)	025.267-014	02.04
METEOROLOGIST	(025.088 WTG 88)	025.062-010	02.01
METER READER	(239.588 WTG 29)	209.567-010	05.09
MICROBIOLOGIST	(041.081 WTG 87)	041.061-058	02.02
MILLINER	(784.281 WTG 37)	784.261-010	01.06
MILLING-MACHINE OPERATOR, PRODUCTION	(605.885 WTG 84)	605.685-030	06.04
(Millman, Woodworking) MACHINIST, WOOD	(669.380 WTG 80)	669.380-014	05.05
MILLWRIGHT	(638.281 WTG 37)	638.281-018	05.05

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DOT Title if different	DOT Code — WTG #	DOT Code Area —	WTG #
MINER	(939.281 WTG 37)	939.281-010	05.11
MINING ENGINEER	(010.081 WTG 53)	010.061-014	05.01
(Missionary) CLERGY MEMBER	(120.108 WTG 32)	120.007-010	10.01
(Mobile Home Installer) INSTALLER	(806.884 WTG 39)	869.684-026	06.02
(Mobile Home Repairer) REPAIRER, MANUFACTURED BUILDINGS	(899.884 WTG 39)	869.384-010	05.10
MODEL	(297.868 WTG 71)	297.667-014	01.08
MOLDER	(518.381 WTG 37)	518.361-010	06.01
(Motion Picture Producer) PRODUCER	(187.168 WTG 10)	187.167-174	01.01
MOTION PICTURE PROJECTIONIST	(960.382 WTG 108)	960.362-010	05.10
MOTORCYCLE REPAIRER	(620.281 WTG 37)	620.281-054	05.05
(Moving Picture Projectionist) MOTION-PICTURE PROJECTIONIST	(960.382 WTG 108)	960.362-010	05.10
MUFFLER INSTALLER	(807.884 WTG 39)	807.664-010	05.10
MUSICIAN, INSTRUMENTAL	(152.048 WTG 64)	152.041-010	01.04
MUSIC LIBRARIAN	(100.388 WTG 24)	100.367-022	11.02
(Music Teacher, School) TEACHER, MUSIC	(152.028 WTG 1)	152.021-010	01.04
MUSIC THERAPIST	(079.128 WTG 91)	076.127-014	10.02
MYCOLOGIST	(041.081 WTG 87)	041.061-062	02.02
(Naval Architect) ARCHITECT, MARINE	(001.081 WTG 53)	001.061-014	05.01
(Newspaper Editor) EDITOR, NEWSPAPER	(132.018 WTG 111)	132.017-014	11.08
(Newspaper Reporter) REPORTER	(132.268 WTG 113)	131.262-018	11.08
(News Photographer) PHOTOJOURNALIST	(143.062 WTG 3)	143.062-034	01.02
NUCLEAR ENGINEER	(015.081 WTG 53)	015.061-014	05.01
NURSE AIDE	(355.878 WTG 93)	355.674-014	10.03
NURSE ANESTHETIST	(075.378 WTG 92)	075.371-010	10.02
NURSE, LICENSED PRACTICAL	(079.378 WTG 92)	079.374-014	10.02
(Nurse, Man) NURSE, GENERAL DUTY	(075.378 WTG 92)	075.374-010	10.02
(Nurse, Psychiatric) NURSE, GENERAL DUTY	(075.378 WTG 92)	075.374-010	10.02
(Nurse, Public Health) NURSE STAFF, COMMUNITY HEALTH	(075.128 WTG 40)	075.124-014	10.02
(Nurseryman) MANAGER, NURSERY	(406.168 WTG 10)	180.167-042	03.01
(Nursery School Teacher) NURSERY SCHOOL ATTENDANT	(359.878 WTG 93)	359.677-018	10.03
NURSE, SCHOOL	(075.128 WTG 40)	075.124-010	10.02

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(Occupational/Industrial Health Nurse) NURSE, STAFF, OCCUPATIONAL HEALTH NURSING	(075.378 WTG 92)	075.374-022	10.02
OCCUPATIONAL THERAPIST	(079.128 WTG 91)	076.121-010	10.02
(Occupational Therapy Assistant) OCCUPATIONAL THERAPY AIDE	(079.368 WTG 92)	355.377-010	10.03
(Office Boy) OFFICE HELPER	(230.878 WTG 106)	239.567-010	07.07
(Office Machine Serviceman) OFFICE MACHINE SERVICER	(633.281 WTG 37)	633.281-018	05.05
(Office Manager) MANAGER, OFFICE	(169.168 WTG 10)	169.167-034	07.01
(Offset Pressman) OFFSET PRESS OPERATOR 1	(651.782 WTG 82)	651.482-010	05.05
(Oil & Gas Driller) ROTARY DRILLER	(930.782 WTG 82)	930.382-026	05.11
OPERATING ENGINEER	(859.883 WTG 83)	859.683-010	05.11
(Operating Room Technician) SURGICAL TECHNICIAN	(079.378 WTG 92)	079.374-022	10.03
OPERATIONS RESEARCH ANALYST	(020.088 WTG 88)	020.067-018	11.01
OPHTHALMOLOGIST	(070.108 WTG 90)	070.101-058	02.03
(Optical Technician) PRECISION-LENS GRINDER	(675.380 WTG 80)	716.382-018	06.02
OPTICIAN	(713.381 WTG 37)	713.280-008	05.05
OPTOMETRIST	(079.108 WTG 90)	079.101-018	02.03
ORDERLY	(355.878 WTG 93)	355.674-018	10.03
ORTHODONTIST	(072.108 WTG 90)	072.101-022	02.03
ORTHOPTIST	(079.378 WTG 92)	079.371-014	10.02
OSTEOPATHIC PHYSICIAN	(071.108 WTG 90)	071.101-010	02.03
PACKAGING ENGINEER	(019.187 WTG 58)	019.187-010	05.03
PAINTER	(840.781 WTG 38)	840.381-010	05.10
PAINTER	(144.081 WTG 4)	144.061-010	01.02
PAINTER, SIGN	(970.381 WTG 37)	970.381-026	01.06
PAINTER, SPRAY 2	(741.887 WTG 52)	741.687-018	06.04
PALEONTOLOGIST		024.061-042	02.02
PAPERHANGER	(841.781 WTG 38)	841.381-010	05.05
(Parking Attendant) PARKING LOT ATTENDANT	(915.878 WTG 105)	915.473-010	09.04
PARKING-LOT ATTENDANT	(915.878 WTG 105)	915.473-010	09.04
PARK NATURALIST	(099.228 WTG 44)	049.127-010	11.07
PARK RANGER	(169.168 WTG 74)	169.167-042	04.02
PARK SUPERINTENDENT	(188.168 WTG 10)	188.167-062	04.01
PATHOLOGIST	(070.081 WTG 87)	070.061-010	02.02
PATTERNMAKER, METAL	(600.280 WTG 80)	600.280-050	05.05
PATTERNMAKER, WOOD	(661.281 WTG 37)	661.281-022	05.05
(PBX Operator) TELEPHONE OPERATOR	(235.662 WTG 30)	235.662-022	07.04

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PEDIATRICIAN	(070.108 WTG 90)	070.101-066	02.03
(Personnel Supervisor) MANAGER, PERSONNEL	(166.118 WTG 6)	166.117-018	11.05
(Pest Control Operator) EXTERMINATOR	(389.884 WTG 39)	389.684-010	05.10
PETROLEUM ENGINEER	(010.081 WTG 53)	010.061-018	05.01
(Pharmaceutical Sales Representative) SALES REPRESENTATIVE, CHEMICALS AND DRUGS	(266.258 WTG 97)	262.357-010	08.01
PHARMACIST	(074.181 WTG 75)	074.161-010	02.04
PHARMACOLOGIST	(041.081 WTG 87)	041.061-074	02.02
PHOTOENGRAVER 1	(971.381 WTG 37)	971.381-022	01.06
PHOTOGRAMMETRIST	(018.281 WTG 56)	018.261-026	05.03
(Photographer, Commercial) PHOTOGRAPHER, STILL	(143.062 WTG 3)	143.062-030	01.02
(Photographer, News) PHOTOJOURNALIST	(143.062 WTG 3)	143.062-034	01.02
(Photographic Equipment Repair Technician) CAMERA REPAIRER	(714.281 WTG 37)	714.281-014	05.05
(Photolithographer) PHOTOGRAPHER, LITHOGRAPHIC	(972.382 WTG 108)	972.382-014	01.06
(Physical Education Instructor) INSTRUCTOR, PHYSICAL EDUCATION	(153.228 WTG 47)	099.224-010	11.02
(Physical Education Teacher) INSTRUCTOR, PHYSICAL EDUCATION	(153.228 WTG 47)	099.224-010	11.02
PHYSICAL THERAPIST	(079.378 WTG 92)	076.121-014	10.02
(Physician) GENERAL PRACTITIONER	(070.108 WTG 90)	070.101-022	02.03
(Physician, Osteopathic) OSTEOPATHIC PHYSICIAN	(071.108 WTG 90)	071.101-010	02.03
(Physician's Assistant) MEDICAL ASSISTANT	(079.368 WTG 92)	079.367-010	10.03
PHYSICIST	(023.081 WTG 87)	023.061-014	02.01
(Physiologist, Animal) PHYSIOLOGIST	(041.081 WTG 87)	041.061-078	02.02
PIANO TUNER	(730.381 WTG 37)	730.361-010	05.05
(Pilot, Commercial Airplane) AIRPLANE PILOT, COMMERCIAL	(196.283 WTG 77)	196.263-014	05.04
(Pilot, Helicopter) HELICOPTER PILOT	(196.283 WTG 77)	196.263-038	05.04
(Pipefitter and Steamfitter) PIPE FITTER	(862.281 WTG 37)	862.261-010	05.05
PLANT PATHOLOGIST	(041.081 WTG 87)	041.061-086	02.02
PLASTERER	(842.781 WTG 38)	842.361-018	05.05
(Platemaker, Lithographic) LITHOGRAPHIC PLATE MAKER	(972.381 WTG 37)	972.381-010	01.06
PLAYWRIGHT	(131.088 WTG 112)	131.067-038	01.01
PLUMBER	(862.381 WTG 37)	862.381-030	05.05
PODIATRIST	(079.108 WTG 90)	079.101-022	02.03
POLICE AIDE	(249.588 WTG 29)	243.362-014	07.04
POLICE OFFICER I	(375.268 WTG 74)	375.263-014	04.01

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(Policewoman) POLICE OFFICER I	(375.268 WTG 74)	375.263-014	04.01
POLITICAL SCIENTIST	(051.088 WTG 31)	051.067-010	11.03
(Postal Clerk) POST OFFICE CLERK	(232.368 WTG 20)	243.367-014	07.03
POST OFFICE CLERK	(232.368 WTG 20)	243.367-014	07.03
(Poultryman) POULTRY FARMER	(412.181 WTG 72)	411.161-018	03.01
(Power Shovel-Crane Operator) POWER SHOVEL OPERATOR	(850.883 WTG 83)	850.683-030	05.11
(Power Truck Operator) INDUSTRIAL TRUCK OPERATOR	(922.883 WTG 83)	921.683-050	06.04
(Presser, Shirt) SHIRT PRESSER	(363.885 WTG 84)	363.685-026	06.04
(Presser, Women's Garments) PRESSER, FORM	(363.885 WTG 84)	363.685-018	06.04
(Press Photographer) PHOTOJOURNALIST	(143.062 WTG 3)	143.062-034	01.02
(Priest) CLERGY MEMBER	(120.108 WTG 32)	120.007-010	10.01
(Principal, School) PRINCIPAL	(091.118 WTG 6)	099.117-018	11.02
(Private Switchboard Operator) TELEPHONE OPERATOR	(235.862 WTG 30)	235.662-022	07.04
PROBATION OFFICER	(195.108 WTG 32)	195.167-034	10.01
(Product Demonstrator) DEMONSTRATOR	(297.458 WTG 97)	297.354-010	08.02
PRODUCTION MACHINE TENDER	(609.885 WTG 84)	609.685-018	06.04
PROFESSIONAL ATHLETE	(153.348 WTG 68)	153.341.010	12.01
(Program Director, Radio and TV) DIRECTOR, PROGRAM	(184.168 WTG 10)	184.167-030	11.05
(Programmer) PROGRAMMER, BUSINESS	(020.188 WTG 88)	020.162-014	11.01
PROOFREADER	(209.688 WTG 29)	209.387-030	07.05
(Proofreader I) PROOFREADER	(209.688 WTG 29)	209.387-030	07.05
(Property and Liability Insurance Agent) SALES AGENT, INSURANCE	(250.258 WTG 97)	250.257-010	08.01
PROSTHETIST	(078.368 WTG 92)	078.261-022	05.05
(Prosthetist-Orthotist) PROSTHETIST	(078.368 WTG 92)	078.261-022	05.05
PSYCHIATRIC AID	(355.878 WTG 93)	355.377-014	10.03
(Psychiatric Social Worker) SOCIAL WORKER, PSYCHIATRIC	(195.108 WTG 32)	195.107-034	10.01
PSYCHIATRIST	(070.108 WTG 90)	070.107-014	02.03
PSYCHOLOGIST, CLINICAL	(045.108 WTG 32)	045.107-022	10.01
PSYCHOLOGIST, SCHOOL	(045.108 WTG 32)	045.107-034	10.01
(Public Health Nurse) NURSE, STAFF, COMMUNITY HEALTH	(075.128 WTG 40)	075.124-014	10.02
(Public Health Sanitarium) SANITARIAN	(079.118 WTG 6)	079.117-018	11.10

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(Public Librarian) LIBRARIAN	(100.168 WTG 10)	100.127-014	11.02
(Public Relations Officer, College) PUBLIC RELATIONS REPRESENTATIVE	(165.068 WTG 94)	165.067-010	11.09
(Public Relations Secretary) SECRETARY	(210.368 WTG 18)	201.362-030	07.01
(Public Relations Specialist) PUBLIC-RELATIONS REPRESENTATIVE	(165.068 WTG 94)	165.067-010	11.09
(Public Relations Worker) PUBLIC-RELATIONS REPRESENTATIVE	(165.068 WTG 94)	165.067-010	11.09
PUNCH-PRESS OPERATOR I	(615.782 WTG 82)	615.482-022	06.02
PURCHASING AGENT	(162.158 WTG 95)	162.157-038	11.05
QUALITY-CONTROL ENGINEER	(012.188 WTG 59)	012.167-054	05.01
(Rabbi) CLERGY MEMBER	(120.108 WTG 32)	120.007-010	10.01
RADIATION MONITOR	(199.187 WTG 76)	199.167-010	05.03
(Radio and Television Announcer) ANNOUNCER	(159.148 WTG 67)	159.147-010	01.03
(Radio and Television Serviceman) TELEVISION-AND-RADIO REPAIRER	(720.281 WTG 37)	720.281-018	05.10
(Radio and Television Serviceman) TELEVISION-AND-RADIO REPAIRER	(720.281 WTG 37)	720.281-018	05.10
(Radio and TV Time Salesperson) SALES REPRESENTATIVE, RADIO AND TELEVISION TIME	(253.358 WTG 97)	259.357-018	08.01
(Radio Engineer) ENGINEER-IN-CHARGE, TRANSMITTER	(003.187 WTG 58)	003.167-034	05.01
(Radio-TV Service Technician) TELEVISION-AND-RADIO REPAIRER	(720.281 WTG 37)	720.281-018	05.10
RADIOGRAPHER	(199.381 WTG 75)	199.361-010	05.03
RADIOLOGIC TECHNOLOGIST	(078.368 WTG 92)	078.362-026	10.02
RADIOLOGIST	(070.108 WTG 90)	070.101-090	02.03
(Railroad Brake Operator) BRAKE OPERATOR I	(617.380 WTG 110)	617.360-010	06.02
(Railroad Conductor) CONDUCTOR, PASSENGER CAR	(198.168 WTG 10)	198.167-010	11.11
(Railroad Dining-Car Waiter) WAITER/WAITRESS, DINING CAR	(311.878 WTG 105)	311.477-022	09.04
(Rangeland Specialist) RANGE MANAGER	(040.081 WTG 87)	040.061-046	02.02
(Real Estate Agent) SALES AGENT, REAL ESTATE	(250.358 WTG 97)	250.357-018	08.02
(Real Estate Appraiser) APPRAISER, REAL ESTATE	(191.287 WTG 76)	191.267-010	11.06
RECEPTIONIST	(237.368 WTG 16)	237.367-038	07.04
RECREATIONAL THERAPIST	(079.128 WTG 91)	076.124-014	10.02
RECREATION-FACILITY ATTENDANT	(341.368 WTG 19)	341.367-010	07.04

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RECREATION LEADER	(195.228 WTG 46)	195.227-014	11.07
(Recreation Leader) DIRECTOR, RECREATION CENTER	(195.168 WTG 10)	195.167-026	11.11
REFRIGERATION MECHANIC	(637.281 WTG 37)	637.261-026	05.05
REGISTRAR, COLLEGE OR UNIVERSITY	(090.168 WTG 6)	090.167-030	11.05
(Rehabilitation Counselor) COUNSELOR	(045.108 WTG 32)	045.107-010	10.01
(Religious Education Director) DIRECTOR, RELIGIOUS EDUCATION	(129.108 WTG 32)	129.107-022	11.02
REPORTER	(132.268 WTG 113)	131.267-018	11.08
(Restaurant Host/Hostess) HOST/HOSTESS, RESTAURANT	(310.868 WTG 104)	310.137-010	09.01
(Restaurant Manager) MANAGER, FOOD SERVICE	(187.168 WTG 10)	187.167-106	11.11
(Retail Butcher) MEAT CUTTER	(316.884 WTG 39)	316.684-018	05.10
(Retail Clothing Salespeople) SALESPERSON, GENERAL MERCHANDISE	(289.458 WTG 97)	279.357-054	08.02
(Retail Salespeople) SALESPERSON, GENERAL MERCHANDISE	(289.458 WTG 97)	279.357-054	08.02
RIGGER	(921.280 WTG 80)	921.260-010	05.11
(Roman Catholic Priest) CLERGY MEMBER	(120.108 WTG 32)	120.007-010	10.01
ROOFER	(866 381 WTG 37)	866.381-010	05.10
(Room Clerk) HOTEL CLERK	(242.368 WTG 19)	238.362-010	07.04
(Route Salesman) DRIVER, SALES ROUTE	(292.358 WTG 97)	292.353-010	08.02
(Routeworker) DRIVER, SALES ROUTE	(292.358 WTG 97)	292.353-010	08.02
SAFETY ENGINEER	(012.081 WTG 53)	012.061-014	05.01
SALES AGENT, REAL ESTATE	(250.358 WTG 97)	250.357-018	08.02
SALES CLERK	(290.478 WTG 102)	290.477-014	09.04
(Sales Demonstrator) DEMONSTRATOR	(297.458 WTG 97)	297.354-010	08.02
(Sales Manager) MANAGER, SALES	(163.118 WTG 6)	163.167-018	11.05
(Salesman, Automobile) SALESPERSON, AUTOMOBILES	(280.358 WTG 97)	273.353-010	08.02
(Salesman, General) SALES REPRESENTATIVE, GENERAL MERCHANDISE	(289.358 WTG 97)	279.357-014	08.02
(Salesman, Grocery Products) SALES REPRESENTATIVE, FOOD PRODUCTS	(262.358 WTG 97)	260.357-014	08.02
(Salesman, Manufacturers') MANUFACTURERS' REPRESENTATIVE	(289.158 WTG 95)	279.157-010	08.02
(Salesman, Manufacturers' and Wholesale) MANUFACTURERS' REPRESENTATIVE	(289.158 WTG 95)	279.157-010	08.02

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(Salesman, Radio & TV Broadcast Time) SALES REPRESENTATIVE, RADIO AND TELEVISION TIME	(253.358 WTG 97)	259.357-018	08.01
(Salesman, Real Estate) SALES AGENT, REAL ESTATE	(250.358 WTG 97)	250.357-018	08.02
(Salesman, Wholesale Trade) SALES REPRESENTATIVE, GENERAL MERCHANDISE	(289.358 WTG 97)	279.357-014	08.02
(Sales Marketing Manager) MANAGER, SALES	(163.118 WTG 6)	163.167-018	11.05
(Salesperson, Advertising Space) SALES REPRESENTATIVE, ADVERTISING	(258.358 WTG 97)	254.357-014	08.01
(Salesperson, Drugstore) SALESPERSON, GENERAL MERCHANDISE	(289.458 WTG 97)	279.357-054	08.02
(Salesperson, Hardware) SALESPERSON, GENERAL HARDWARE	(276.358 WTG 97)	279.357-050	08.02
(Salesperson, House-to-House) SALES REPRESENTATIVE, DOOR-TO-DOOR	(289.358 WTG 97)	291.357-010	08.02
(Salesperson, Securities) SALES AGENT, SECURITIES	(251.258 WTG 97)	251.157-010	11.06
(Sales Promotion Manager, Retail) MANAGER, ADVERTISING	(164.118 WTG 6)	164.117-010	11.09
SANITARIAN	(079.118 WTG 6)	079.117-018	11.10
SANITARY ENGINEER	(005.081 WTG 53)	005.061-030	05.01
(Scene Designer) SET DESIGNER	(142.081 WTG 4)	142.061-050	01.02
(School Counselor) COUNSELOR	(045.108 WTG 32)	045.107-010	10.01
(School Janitor) JANITOR	(382.884 WTG 39)	382.664-010	05.12
(School Nurse) NURSE, SCHOOL	(075.128 WTG 40)	075.124.010	10.02
(School Psychologist) PSYCHOLOGIST, SCHOOL	(045.108 WTG 32)	045.107-034	10.01
(School Superintendent) SUPERINTENDENT, SCHOOLS	(091.118 WTG 6)	099.117-022	11.07
(Science Teacher, High School) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
(Science Writer) WRITER, TECHNICAL PUBLICATIONS	(139.288 WTG 61)	131.267-026	11.08
(Seafarer, Able) ABLE SEAMAN	(911.884 WTG 39)	911.364-010	05.12
(Secondary School Teacher) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
SECRETARY	(201.368 WTG 18)	201.362-030	07.01
(Secretary, Bilingual) SECRETARY	(201.368 WTG 18)	201.362-030	07.01
(Secretary, Legal) LEGAL SECRETARY	(201.368 WTG 18)	201.362-010	07.01
(Secretary, Male) SECRETARY	(201.368 WTG 18)	201.362-030	07.01
(Secretary, Public Relations) SECRETARY	(201.368 WTG 18)	201.362-030	07.01

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(Secretary, Technical) SECRETARY	(201.368 WTG 18)	210.362-030	07.01
(Securities Sales Agent) SALES AGENT, SECURITIES	(251.258 WTG 97)	251.157-010	11.06
(Securities Salesman) SALES AGENT, SECURITIES	(251.258 WTG 97)	251.157-010	11.06
(Service Representative) CHARGE-ACCOUNT CLERK	(249.368 WTG 16)	205.367-014	07.04
(Service Representative for Public Utilities) CUSTOMER-SERVICE REPRESENTATIVE	(249.368 WTG 16)	239.367-010	07.04
(Service Station Worker) AUTOMOBILE-SERVICE-STATION ATTENDANT	(915.867 WTG 103)	915.467-010	05.10
(Setup Person) JOB SETTER	(600.380 WTG 80)	600.380-014	06.01
SEWING MACHINE OPERATOR		787.682-046	06.02
SHEET METAL WORKER	(804.281 WTG 37)	804.281-010	05.05
(Ship Designer) ARCHITECT, MARINE	(001.081 WTG 53)	001.061-014	05.01
SHIPPING AND RECEIVING CLERK	(222.387 WTG 22)	222.387-050	05.09
(Shipping Clerk II) SHIPPING AND RECEIVING CLERK	(222.587 WTG 2[illegible])	222.387-050	05.09
(Shoe Repairman) SHOE REPAIRER	(365.381 WTG 37)	365.361-014	05.05
(Shopper, Comparison) COMPARISON SHOPPER	(296.388 WTG 24)	296.367-014	08.01
SHORTHAND REPORTER	(202.388 WTG 25)	202.362-010	07.05
(Sign Painter) PAINTER, SIGN	(970.381 WTG 37)	970.381-026	01.06
SIGN WRITER, HAND	(970.081 WTG 4)	970.281-022	01.06
(Social Service Aid) CASE AIDE	(195.208 WTG 32)	195.367-010	10.01
(Social Worker) CASE WORKER	(195.108 WTG 32)	195.107-010	10.01
SOCIAL WORKER, MEDICAL	(195.108 WTG 32)	195.107-030	10.01
SOCIAL WORKER, PSYCHIATRIC	(195.108 WTG 32)	195.107-034	10.01
SOCIAL WORKER, SCHOOL	(195.108 WTG 32)	195.107-038	10.01
SOCIOLOGIST	(054.088 WTG 31)	054.067-014	11.03
SOIL CONSERVATIONIST	(040.081 WTG 87)	040.061-054	02.02
SOIL SCIENTIST	(040.081 WTG 87)	040.061-058	02.02
(Special Agent, FBI) SPECIAL AGENT	(375.168 WTG 74)	375.167-042	04.01
(Specail Librarian) LIBRARIAN, SPECIAL COLLECTIONS	(100.168 WTG 10)	100.267-014	11.02
SPEECH PATHOLOGIST	(079.108 WTG 90)	076.107-010	02.03
(Sports Instructor) INSTRUCTOR, SPORTS	(153.228 WTG 47)	153.227-018	12.01
(Spray Painter) PAINTER, SPRAY 2	(741.887 WTG 52)	741.687-018	06.04
(State Highway Patrolman) STATE HIGHWAY POLICE OFFICER	(375.268 WTG 74)	375.263-018	04.01
STATIONARY ENGINEER	(950.782 WTG 82)	950.382-026	05.06

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STATISTICAL CLERK	(219.388 WTG 26)	216.382-062	07.02
(Statistician) STATISTICIAN, APPLIED	(020.188 WTG 88)	020.167-026	11.01
STENOGRAPHER	(202.388 WTG 25)	202.362-014	07.05
STOCK CLERK	(223.387 WTG 22)	222.387-058	05.09
STONEMASON	(861.781 WTG 38)	861.381-038	05.05
(Structural-Iron Worker) STRUCTURAL-STEEL WORKER	(801.781 WTG 38)	801.361-014	05.05
STRUCTURAL-STEEL WORKER	(801.781 WTG 38)	801.361-014	05.05
(Supermarket Manager) MANAGER, RETAIL STORE	(185.168 WTG 10)	185.167-046	11.11
(Surveyor) SURVEYOR, LAND	(018.188 WTG 60)	018.167-018	05.03
(Swimming Pool Service Technician) SWIMMING POOL SERVICER	(891.884 WTG 39)	891.684-018	05.10
(Systems Analyst) SYSTEMS ANALYST, ELECTRONIC DATA PROCESSING	(012.168 WTG 55)	012.167-066	11.01
(Systems Engineer) ENGINEERING ANALYST	(020.088 WTG 88)	020.067-010	11.01
TABULATING-MACHINE OPERATOR	(213.782 WTG 82)	213.682-010	07.06
(Tailor) CUSTOM TAILOR	(785.261 WTG 35)	785.261-014	05.05
TAPE LIBRARIAN	(223.387 WTG 22)	206.387-020	07.05
(Taxicab Driver) TAXI DRIVER	(913.463 WTG 110)	913.463-018	09.03
TAXIDERMIST	(199.281 WTG 37)	199.261-010	01.06
TAXI DRIVER	(913.463 WTG 110)	913.463-018	09.03
(Teacher, Art) TEACHER, SECONDARY SCHOOL	(149.028 WTG 1)	091.227-010	11.02
(Teacher, Art-Elementary) TEACHER, ELEMENTARY SCHOOL	(092.228 WTG 45)	092.227-010	11.02
(Teacher, Art-High School) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
(Teacher, Business Education) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
(Teacher, Elementary) TEACHER, ELEMENTARY SCHOOL	(092.228 WTG 45)	092.227-010	11.02
TEACHER, ELEMENTARY SCHOOL	(092.228 WTG 45)	092.227-010	11.02
(Teacher, English) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44	091.227-010	11.02
(Teacher, Exceptional Children) TEACHER, HANDICAPPED STUDENTS	(094.228 WTG 45)	094.227-018	10.01
(Teacher, Foreign Language) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
(Teacher, High School) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
(Teacher, Home Economics) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02

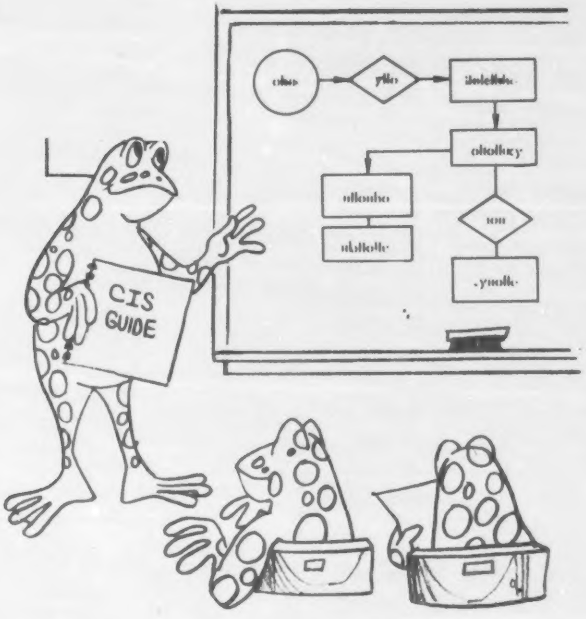
Brief Title DOT Title if different	Third Edition DOT Code — WTG #	Fourth Edition DOT Code Area — WTG #	
TEACHER, INDUSTRIAL ARTS	(091.228 WTG 44)	091.221-010	11.02
TEACHER, MUSIC	(152.028 WTG 1)	152.021-010	01.04
(Teacher of Exceptional Children) TEACHER, HANDICAPPED STUDENTS	(094.228 WTG 45)	094.227-018	10.01
(Teacher of Handicapped Children) TEACHER, HANDICAPPED	(094.228 WTG 45)	094.227-018	10.01
(Teacher of the Deaf and Hard of Hearing) TEACHER, DEAF	(094.228 WTG 44)	094.224-010	10.01
(Teacher, Physical Education) INSTRUCTOR, PHYSICAL EDUCATION	(153.228 WTG 47)	099.224-010	11.02
TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
(Teacher, Science) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
(Teacher, Social Studies) TEACHER, SECONDARY SCHOOL	(091.228 WTG 44)	091.227-010	11.02
(Teacher, Special Education) TEACHER, HANDICAPPED STUDENTS	(094.228 WTG 45)	094.227-018	10.01
TECHNICAL ILLUSTRATOR	(017.281 WTG 56)	017.281-034	05.03
(Technical Writer) WRITER, TECHNICAL PUBLICATIONS	(139.288 WTG 61)	131.267-026	11.08
(Telephone Installer) STATION INSTALLER	(822.381 WTG 37)	822.261-022	05.05
(Telephone Installer) STATION INSTALLER-AND-REPAIRER	(822.381 WTG 37)	822.261-022	05.05
TELEPHONE OPERATOR	(235.862 WTG 30)	235.662-022	07.04
(Telephone Operator) CENTRAL OFFICE OPERATOR	(235.862 WTG 30)	235.462-010	07.04
(Telephone Operator, Central Office) CENTRAL-OFFICE OPERATOR	(235.862 WTG 30)	235.462-010	07.04
(Teletypewriter Operator) TELEGRAPHIC-TYPEWRITER OPERATOR	(203.588 WTG 28)	203.582-050	07.06
(Television and Radio Service Technician) TELEVISION-AND-RADIO REPAIRER	(720.281 WTG 37)	720.281-018	05.10
(Television Director) DIRECTOR, TELEVISION		159.067-014	01.03
TELLER	(212.368 WTG 20)	211.362-018	07.03
(Theater Manager) MANAGER, THEATER	(187.168 WTG 10)	187.167-154	11.11
TICKET AGENT	(919.368 WTG 19)	238.367-026	07.03
TILE SETTER	(861.781 WTG 38)	861.381-054	05.05
TIME-STUDY ENGINEER	(012.188 WTG 59)	012.167-070	05.01
(Tire Rebuilder) TIRE BUILDER	(750.884 WTG 39)	750.684-022	05.12
(Tire Retreader) TIRE BUILDER	(750.884 WTG 39)	750.684-022	05.12
TITLE EXAMINER	(199.288 WTG 14)	119.287-010	07.01
TOOL-AND-DIE-MAKER	(601.280 WTG 80)	601.280-046	05.05
(Toolmaker and Diemaker) TOOL-AND-DIE-MAKER	(601.280 WTG 80)	601.280-046	05.05
(Tool Design Technician) TOOL DESIGNER	(007.081 WTG 53)	007.061-026	05.01
TOOL GRINDER 2	(603.885 WTG 84)	603.664-010	05.12

Brief Title DOT Title if different	Third Edition DOT Code — WTG #	Fourth Edition DOT Code Area — WTG #	
TOOL MAKER	(601.280 WTG 80)	601.280-042	05.05
TOW-TRUCK OPERATOR	(919.883 WTG 83)	919.663-026	05.08
(Tracer) DRAFTER, ASSISTANT	(017.281 WTG 56)	017.281-018	05.03
(Traffic Manager) MANAGER, TRAFFIC	(184.168 WTG 10)	184.167-094	11.05
(Training Director) MANAGER, EDUCATION AND TRAINING	(166.118 WTG 6)	166.167-026	11.02
TRANSLATOR	(137.288 WTG 114)	137.267-018	11.08
(Translator, Foreign Language) TRANSLATOR	(137.288 WTG 114)	137.267-018	11.08
TRAVEL AGENT		252.157-010	08.02
(Travel Counselor) TRAVEL AGENT		252.157-010	08.02
(Tree Expert) TREE SURGEON	(409.181 WTG 72)	408.181-010	03.01
(Truck and Bus Mechanic) AUTOMOBILE MECHANIC	(620.281 WTG 37)	620.261-010	05.05
(Truck Farmer) FARMER, VEGETABLE	(403.181 WTG 72)	402.161-010	03.01
(Truck Operator, Industrial) INDUSTRIAL-TRUCK OPERATOR	(922.883 WTG 83)	921.683-050	06.04
(Typewriter Serviceman) OFFICE MACHINE SERVICER	(633.281 WTG 37)	633.281-018	05.05
TYPIST	(203.588 WTG 28)	203.582-066	07.06
(Union Business Agent) BUSINESS REPRESENTATIVE LABOR UNION	(187.118 WTG 6)	187.117-022	11.05
(Upholsterer) FURNITURE UPHOLSTERER	(780.381 WTG 37)	780.381-018	05.05
URBAN PLANNER	(199.168 WTG 6)	199.167-014	11.03
USHER	(344.878 WTG 106)	344.677-014	09.05
(Vegetable Farmer) FARMER, VEGETABLE	(403.181 WTG 72)	402.161-010	03.01
(Vegetable Producer) FARMER, VEGETABLE	(403.181 WTG 72)	402.161-010	03.01
(Vending Machine Mechanic) COIN MACHINE SERVICE REPAIRER	(639.381 WTG 37)	639.281-014	05.10
(Vending Machine Operator) SUPERVISOR, ROUTE SALES-DELIVERY DRIVERS	(292.138 WTG 9)	292.137-014	08.02
(Vending Machine Repairman) COIN MACHINE REPAIRER	(639.381 WTG 37)	639.281-014	05.10
(Vending Machine Routeman) COIN COLLECTOR	(292.483 WTG 98)	292.483-010	05.08
VERITYPE OPERATOR	(203.582 WTG 23)	203.382-026	07.06
VETERINARIAN	(073.108 WTG 90)	073.101-010	02.03
VOCATIONAL REHABILITATION COUNSELOR		045.107-042	10.01

Brief Title DOT Title if different	Third Edition DOT Code — WTG #	Fourth Edition DOT Code	Area — WTG #
(Waiter and Waitress) WAITER/WAITRESS, FORMAL	(311.878 WTG 105)	311.477-026	09.04
WAITER/WAITRESS, FORMAL	(311.878 WTG 105)	311.477-026	09.04
(Waiter's Assistant) DINING ROOM ATTENDANT	(311.878 WTG 105)	311.677-018	09.05
(Warehouseman) LABORER, STORES	(922.887 WTG 52)	922.687-058	05.09
WASTEWATER-TREATMENT PLANT OPERATOR	(955.782 WTG 82)	955.362-010	05.06
(Watchmaker) WATCH REPAIRER	(715.281 WTG 37)	715.281-010	06.01
(Watch Repairman) WATCH REPAIRER	(715.281 WTG 37)	715.281-010	06.01
(Waterwell Driller) WELL-DRILL OPERATOR	(859.782 WTG 82)	859.362-010	05.11
WEDDING CONSULTANT	(299.358 WTG 97)	299.357-018	08.02
(Wildlife Manager) RANGE MANAGER	(040.081 WTG 87)	040.061-046	02.02
(Window Cleaner) CLEANER, WINDOW	(389.887 WTG 52)	389.687-014	05.12
(Wood Scientist) WOOD TECHNOLOGIST	(040.081 WTG 87)	040.061-062	02.02
(Writer, Literary) WRITER, PROSE, FICTION, AND NONFICTION	(130.088 WTG 112)	131.067-046	01.01
(Writer, Technical) WRITER, TECHNICAL PUBLICATIONS	(139.288 WTG 61)	131.267-026	11.08
ZOOLOGIST	(041.081 WTG 87)	041.061-090	02.02

CAREER INFORMATION SYSTEM

UTILIZATION GUIDES



OVERVIEW AND RATIONALE

The utilization guides contained in this section of the **Career Information System Professional Manual** provide specific instructions on how to utilize selected materials of the **Career Information System** (CIS). Prior to using these utilization guides, the teacher/counselor should read the overview and become familiar with the CIS materials.

Overview

The CIS materials consist of guides and filmstrips used for student orientation to concepts designed to develop an understanding of self and the world of work; checklists and other materials used for self-assessment; and charts and indexes to provide a linkage to career information resources.

Most of the CIS materials are reusable. Only the checklists and a student booklet are consumable. The following is a listing and brief description of the CIS materials.

The consumable materials are:

- **Work Activities Checklist.** This checklist uses the ten types of Work Activities as a means for helping students identify the Worker Trait Groups related to each work activity or to a student's pattern of interests. More details on the use of this checklist are located in the Work Activities Checklist Utilization Guide.

- **Work Situations Checklist.** This checklist uses the ten different kinds of Work Situations to help students identify Worker Trait Groups related to Work Situations they enjoy as well as those to which they feel they cannot adapt. These Work Situations relate to temperaments and adaptive skills. More details on the use of this checklist are located in the Work Situations Checklist Utilization Guide.

- **Aptitudes Checklist.** This checklist is used to help students estimate their aptitudes. The aptitudes are those used in the General Aptitude Test Battery. More details on the use of this checklist are located in the Aptitudes Checklist Utilization Guide.

- **Individualized Activities for Career Exploration** (IACE). This is a consumable booklet that includes all of the CIS access variables along with selected materials from the **Exploring Career Decision-Making*** text used as a semester course. The **IACE** may be used as a five-to-nine week course. More details on the use of the **IACE** are located in the Individualized Activities for Career Exploration Utilization Guide.

The nonconsumable materials include guides, charts, indexes, filmstrips, and tapes. The following list of nonconsumable materials do not include those related to the filing and indexing of occupational information. These are fully described in the Career Information System File Plan of this manual.

- **Worker Trait Group Guide** — contains descriptions of the 12 Career Areas and 66 Worker Trait Groups. Each Worker Trait Group description also contains the qualification profile and a listing of the occupations that provide the most opportunities for employment nationally. The **Worker Trait Group Guide** is used with all access variables to help students understand the Worker Trait Groups related to their interests, aptitudes, etc. prior to exploration at the occupational level.

- **Career Information System Guide** — contains the basic information used with all of the CIS access materials. Students need this guide to follow orientation sessions, complete the checklists, and use other access materials.

- **School Subject-Worker Trait Group Chart** — is used to identify Worker Trait Groups related to school subjects and vice versa. More details on the use of this chart are located in the School Subject — Worker Trait Group Chart and School Subject — Occupation Index Utilization Guide.

- **School Subject-Occupation Index** — contains a listing of occupations by Worker Trait Group related to each school subject. It is used as a follow-up to Worker Trait Groups identified on the School Subject — Worker Trait Group Chart. More details on the use of this index are located in the School Subject — Worker Trait Group Chart and School Subject — Occupation Index Utilization Guide.

- **Worker Trait Group Keysort Deck** — a deck of cards with one card representing each Worker Trait Group. The cards provide a manual means for combining factors such as the Work Activities and Work Situations or for identifying patterns related to each variable. More details on the use of this deck are located in the Worker Trait Group Keysort Deck Utilization Guide.

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*Developed by Appalachia Educational Laboratory and published by McKnight Publishing Company.

- **Career Information System Filmstrips and Tapes —** these are used to orient students to the CIS and to present concepts related to the checklists and other access materials. The cassette tapes accompanying the filmstrips have one side with audible beeps and the other side with inaudible beeps. Schools with automatic cassette tape filmstrip projectors may use the inaudible side. The following is a listing and brief description of the filmstrips and tapes.

—**Introduction to the Career Information System.** This filmstrip introduces the **Career Information System** which links self information (interests, values, goals, abilities) to occupational information through Worker Trait Groups. All students using CIS materials should see this filmstrip; however, it must be used with the **Individualized Activities for Career Exploration** (IACE) booklet.

—**Using the Career Information System.** This filmstrip gives specific directions for using the **Career Information System.** It follows a couple of students as they investigate and explore occupations using the system's interest/aptitude checklists and the **Worker Trait Group Guide.** All students using CIS materials should see this filmstrip; however, it must be used with the IACE booklet.

—**Career Goals.** Although people have the same basic survival needs, they have different goals. Individuals also differ in the way they meet their needs and goals. Lifetime work is introduced as a means to meet goals. This filmstrip is used with the IACE booklet.

—**Examining Your Interests.** The filmstrip depicts the different ways people can examine their interests and relate them to occupational alternatives. This filmstrip is used with the IACE booklet.

—**Work Activities.** The filmstrip outlines the ten types of Work Activities and illustrates them with diversified occupations. This filmstrip is used with the IACE booklet and the **Work Activities Checklist.**

—**Work Situations.** The adaptive skills workers need to have in order to face varying work situations are introduced and demonstrated in various occupations. This filmstrip is used with the IACE booklet and the **Work Situations Checklist.**

—**What are Aptitudes?** Aptitude is defined as the facility with which a person can learn new knowledge and skills. The filmstrip depicts how people can identify their aptitudes and use this knowledge in career decision-making. This filmstrip is used with the IACE booklet and the **Aptitudes Checklist.**

—**Learning About Your Aptitudes.** The filmstrip introduces the areas of aptitudes as defined by the U.S. Department of Labor job analysts. How students can examine their aptitudes in these areas and relate them to career choices is outlined. This filmstrip is used with the IACE booklet and the **Aptitudes Checklist.**

—**Credentials and Competencies: Get Ready, Get Set, Go!** The filmstrip depicts the many ways in which people use credentials, including getting a job. Competencies are presented as job keeping skills. How to develop these skills is outlined. This filmstrip is used with the IACE booklet.

—**Sounds of Work** (Tape, Side I). Students are introduced to the sounds workers are exposed to in fifteen different occupations. As they listen to the tape, students are to associate the sounds with the occupations. This tape, designed to make students aware of noise as a factor which could affect job satisfaction, is used with the IACE booklet.

—**What Is My Occupation?** (Tape, Side 2). This tape describes work tasks and the social and physical surroundings for 15 different occupations. As students listen to the tape, they write down the title of the occupation they think is being described. It is designed to make students aware of how these factors are included in the work setting. This tape is used with the IACE booklet.

RATIONALE

An issue of considerable importance in using the CIS materials is related to the "trait factor" orientation of the Worker Trait Groups. The worker characteristics represent one element of the homogeneity of the Worker Trait Groups. The assessment of personal characteristics, relating them to worker characteristics and thus to Worker Trait Groups, provides a general "trait factor" approach which has been criticized by many educators as a "matching process." The "trait factor" approach as typically used in the past relates to **external** assessment. That is, a counselor or other professional tests an individual's abilities or interests, interprets the results, and matches the characteristics to appropriate occupations.

The aproach used with the CIS materials is one of **internal** assessment. This is characterized by the following four phases of learning:

1. Understanding the concept.

2. Personalizing the concept.

3. Assessing self in relation to the concept.

4. Applying the concept.

A general introduction by a teacher/counselor, a filmstrip presentation, and written concept descriptions define and illustrate the concept to help students develop an **understanding** of it (first phase). The use of filmstrips to introduce concepts helps broaden students' perspectives of the world of work and break down stereotyping of occupations.

Once students understand the concept, they need to **personalize** it, to make it meaningful to them as individuals (second phase). They need to realize that they already have a great deal of experience related to work. This experience may be used to personalize the concept. The concept provides the link between personal experience and related groups of occupations.

In the third phase, students use checklists and other materials to **assess** themselves in relation to the concept. These materials do **not** use a standardized measurement approach which has the emphasis on providing normative data for comparing an individual with others. The CIS assessment materials provide a means for sorting and clarifying the elements of a concept. The emphasis here is to identify what elements of the concept are most meaningful to the students.

In the fourth phase, students **apply** the concept. Students relate their interests, aptitudes, adaptive skills, and other factors to the characteristics which have been identified as helpful to workers in the Worker Trait Groups. Thus, students apply what they have learned about the concept and themselves to explore occupations and make career decisions.

The preceding four phases of learning differentiate the **internal** assessment approach from the **external** assessment approach. Individuals must understand themselves and the world of work and be responsible for their own career decisions. The individual and the environment change over time. The concepts related to work remain more stable. Thus, it is important that an individual understands the concepts, internalizes them, and applies them to the changing self and environment throughout life.

INDIVIDUALIZED ACTIVITIES FOR CAREER EXPLORATION UTILIZATION GUIDE

This guide contains instructions and suggestions for using the **Individualized Activities for Career Exploration** (IACE) booklet in the classroom. The activities are taken from the **Exploring Career Decision-Making** text. They have been selected to form a short exploratory course. It is essential to remember, however, that occupational exploration is only one aspect of career development. The full **Exploring Career Decision-Making** course goes into much greater depth in self-exploration, decision-making, and career planning. It approaches career decision-making in the context of social and economic change. Consideration of these elements in addition to exploration skills is necessary for effective career development. It is recommended that you obtain a copy of the Teacher's Edition of the **Exploring Career Decision-Making** text to use as a reference.

To assist you in presenting these activities, this guide includes the **purpose** of the activities, the **equipment and materials** you will need, and **detailed guidelines** for presentation of the activities. It also gives an estimate of the **time** required for each activity, though this will vary from class to class. Times are given in terms of 50-minute class periods. The headings and instructions in this guide parallel those provided for students in the IACE booklet.

Your role as a leader is one of organizing the class sessions, motivating the students, and facilitating the learning process. Learning is the responsibility of the learner. Students must be allowed to assume this responsibility and to apply the process to their career exploration and decision-making.

OVERVIEW

The overview shows the suggested presentation of the activities by class periods.

SUBJECT	ACTIVITIES	TIME
Introduction	• Discussion	1/2 class period
Goal Identification	• Career Goals • Goal Focus Chart	1 class period
Career Information	• Self-Information • Occupational Information • Organizing Occupational Information • Using the Career Information System	2-1/2 class periods
Career Exploration	• Expressed Interests • Work Activities • Work Situations • School Subjects • Aptitudes • Other Factors • Occupational Exploration	14-1/2 class periods
Summary	• Discussion • Summary Chart	1 class period

INTRODUCTION

Career exploration is the process of integrating the information obtained through occupational and self-exploration to form a sound basis for making career decisions.

As students work through the IACE booklet, use the four phases of learning defined in the "Rationale" on page 72 of this manual to help you emphasize the internal assessment approach of the booklet. For each new concept, assist students in (1) developing an understanding of the concept, (2) personalizing the concept, (3) assessing self in relation to the concept, and (4) applying the concept.

Ask students to read the introduction, and then discuss it. Pay particular attention to the four objectives for career planning.

GOAL IDENTIFICATION

Purpose

The purpose of the activities in this section is to help students understand the relation of goals to career, and to help them identify some of their own goals. The more clearly students see how they can get what they want through career activities, the more motivated they will be to commit themselves to career exploration.

Equipment and Materials

Teachers will need:

- Filmstrip projector and cassette tape player
- FS/CASS "Career Goals"

Students will need:

- IACE booklet

Presentation

Activity A — Career Goals
(1/2 class period)

Go over the introductory paragraph with the students, and then show the filmstrip "Career Goals." The filmstrip should help students develop an understanding of (a) goals as anything a person wants to do or to have, (b) career goals as goals met through work, not simply occupational choices, and (c) the need to clarify their goals before they can decide through what career activities their goals are to be met.

Discuss the filmstrip, using the following questions and comments as a guide.

1. **What does the term "goal" mean to you?**
COMMENT: A goal is anything you need or want.

2. **What kinds of goals are described in the filmstrip?**
COMMENT: In the filmstrip, goals are described in three pairings.
(1) Long-term — short term
(2) Important — not-so-important
(3) For self — for others

3. **Do you want the same things members of your family do? that your friends do? Why, or why not?**
COMMENT: Everyone wants different combinations of things.

4. **Are your needs different from the needs of others?**
COMMENT: Basic survival needs — food, shelter, health, love — are essentially the same for all people.

5. **Why do people want different things?**
COMMENT: People are different.

6. **Do you want the same things now that you wanted a year ago?**
COMMENT: Most people's goals change; younger people usually change their goals frequently.

7. **Why do people's goals change?**
COMMENT: People change as a result of growth (maturation) and experience.

8. **Have you ever been in conflict with others because your goals were different from theirs? What did you do about the conflict?**
COMMENT: Most people find themselves in conflict with others. As students give examples, try to bring out the ways in which they can resolve such conflicts.

9. **Do you feel you have control over getting what you want? Why, or why not?**
COMMENT: Ask for examples which show positive action and control.

10. **What have you done to meet your goals?**
COMMENT: Responses here are related to the previous question.

11. **In the filmstrip, work was defined as the performance of activities designed to effect some change, in some aspect of society. Is this definition useful to you? Why, or why not? How would you define work?**
COMMENT: Students should feel free to accept or reject this definition. Ask students to explain their answers.

12. **Why do people work?**
COMMENT: People work to meet goals, either directly (the work itself is satisfying) or indirectly (people work for the opportunity — time or money — to satisfy goals).

13. **What are some examples of work you do?**
COMMENT: Examples of work students do might include schoolwork, chores, hobbies, or part-time jobs. A person does not necessarily get paid for work.

14. **What do you hope to gain from the work you do?**
COMMENT: It is important that students be made to feel that the things they want from work are not of less or more value then the things others want.

15. **Should there be any legal or moral limits on how people meet their goals?**
COMMENT: What should be the view of different groups within society on such means as stealing or using force? Accept a variety of answers, encouraging students to express their thoughts and feelings.

16. **Do you like having goals? Why, or why not?**
COMMENT: Encourage students to express their thoughts and feelings. Accept a wide range of answers.

Go over the key terms and key points with the students to be sure they understand the concepts.

Activity B — Goal Focus Chart
(1/2 class period)

To introduce the Goal Focus Chart, ask students how they think the goals of a 5-year old might differ from those of a 30-, 50-, or 70-year old. Consider such things as responsibility for providing food and shelter (for self or others), child raising, family or health needs, and the main concerns of people in each age range.

Direct students to complete the Goal Focus Chart in their IACE booklet. Suggest that they represent their ideas with words or phrases instead of complete sentences. Encourage them to list what they really want, not what they feel ought to be their goals.

Guide a discussion of the activity, using the following questions and comments.

1. **Do people always achieve their goals? If not, why? Should they still set goals? Can you achieve the goals you have listed? What might help or hinder you in reaching your goals? Do you think you will achieve them? Why, or why not?**
COMMENT: Students may have goals they feel they can and cannot attain. They should be encouraged to question the realism of their own goals, but they should not attempt to determine the realism of others' goals.

2. **If you achieve your goals, are you a better person? Is a person who never does anything a worthless person? Why or why not?**
COMMENT: The intrinsic worth or value of a person is not contingent on his or her accomplishments.

3. **Why is it so hard to think about your life as it might be in 15, 40, or 60 years?**
COMMENT: You do not know all of the factors that will influence your future. Lack of experience and maturity also makes it difficult.

4. **Is there any point in thinking now about goals you might have in 15, 40, or 60 years? Why, or why not?**
COMMENT: Planning ways to accomplish your goals might give you more options, and therefore, make it more likely that you achieve them.

5. **Do you think your goals in several years will be the same as they are now? Why, or why not?**
COMMENT: Change in a person's need for financial support should result in changed goals.

6. **If you had just one year to live and could do anything you wanted, what would you do?**
COMMENT: Every student should be given the opportunity to answer this question. Allow some time for students to think about the question. You may wish to make this a written activity.

7. **Are the things you would do, given "one year to live," related to your long-term life goals? How do you fit your short-term and long-term plans together? What aspects fit? What aspects do not fit?**
COMMENT: You may wish to have students discuss this in small groups, or simply think about it. The "one year to live" question should help students select goals that may be important in both a short- and long-range plan. Ask them to explain why some goals may fit only one plan (such as having and rearing their own children).

CAREER INFORMATION

Purpose

The purpose of the activities in this section is to help students understand that career exploration is an ongoing process of learning about themselves as they learn about the world of work.

Equipment and Materials

Teachers will need:

- Filmstrip projector and cassette tape player
- FS/CASS "Introduction to the Career Information System"
- FS/CASS "Using the Career Information System"
- **Career Information System Guide**
- Access to CIS materials

Students will need:

- IACE booklet
- **Career Information System Guide**

Presentation

Activity C — Self-Information
(1/2 class period)

Ask students to read and discuss the three ways they may look at themselves, outlined in their IACE booklet. You might have students discuss the following poem, by John Masefield, asking which "man" is really the person.

There were three men went down the road
As down the road went he
The man he was, the man they saw
And the man he wanted to be.

Activity D — Occupational Information
(1/2 class period)

Through this activity, students should become aware of the following:

(1) There are thousands of different occupations, many of which are obscure.

(2) The title of an occupation does not always represent what a worker does.

(3) More information than a title is needed for career exploration.

Direct students to complete the quiz. The answers are as follows: a-3, b-1, c-1, d-3, e-2, f-1, g-2, h-2, i-2, j-3.

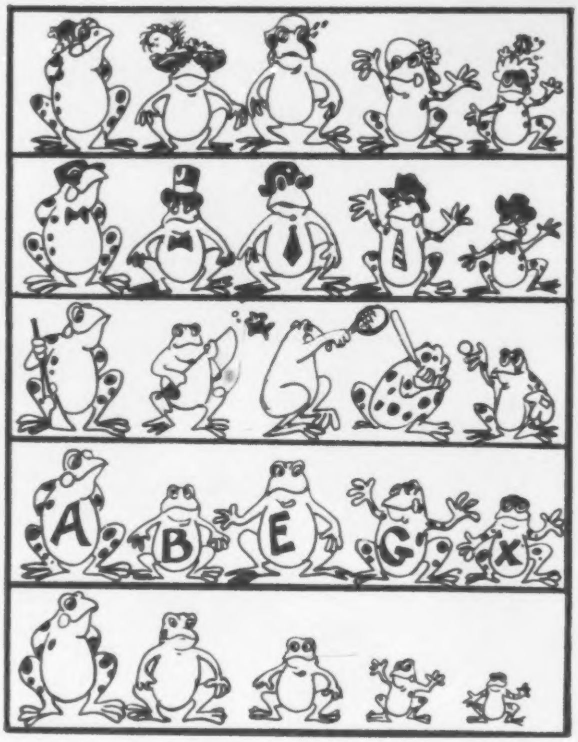
Write the answers on the chalkboard or read them to the class. Direct students to check their answers. Discuss the exercise with the students, using the following comments as a guide.

1. Students need to be aware that there are thousands of occupations of which they may never have heard. These may be occupations which have few people employed in them or which are not found in the students' geographical region.

2. Occupational titles can be misleading. You cannot always know what a worker does from the title. You need a variety of information about an occupation as you consider it as an occupational alternative. Use the chalkboard to record students suggestions about the kinds of occupational information they think could be useful.

Activity E — Organizing Occupational Information
(1/2 class period)

Discuss the concept of classification with the students. As an example, you might ask them to name ways of classifying people (name, age, grade, weight, height, strength, religion, income, etc.). Then ask them how such classification can be useful.



Show the filmstrip "Introduction to the Career Information System." The filmstrip should help students become aware of the need to (a) classify information into different classification systems to facilitate the information's access and (b) use a classification system linking both self and occupational information in order to make satisfying career decisions.

After showing the filmstrip, use the following questions and comments to guide the discussion.

1. **Why is there a need to classify information?**
   COMMENT: Any type of information needs to be organized in order to be found and used.

2. **Why is there a need to use different classification systems on the same type of information?**
   COMMENT: Discuss with the students, for example, the problems a person unfamiliar with the community would have finding a product or a service using only the white pages of the telephone directory.

3. **What classification systems were described in the filmstrip?**
   COMMENT: Help students review the alphabetical and Dewey systems, as well as the **Dictionary of Occupational Titles**' alphabetical and Worker Trait Group Arrangement systems.

4. **What problems could a person have using occupational information filed alphabetically?**
   COMMENT: A person must know the occupational title in order to find it in an alphabetical arrangement.

5. **How are the organization of the Career Information System and the organization of the yellow pages of the telephone directory alike?**
   COMMENT: The organization of the **Career Information System** helps a student find occupations even if the student does not know the name of the occupation.

6. **All the occupational information in the Career Information System is classified by Worker Trait Groups. How can this system help you relate the occupational information to you — your interests, abilities, and aptitudes?**
   COMMENT: The Worker Trait Groups are groups of occupations that have similar worker qualifications such as interests, abilities, and aptitudes. Students can use their own interests, abilities, and aptitudes to explore occupations and make satisfying career decisions.

Activity F — Using the Career Information System
(1 class period)

Show the filmstrip "Using the Career Information System." This filmstrip should help students to develop an understanding of how to use the **Career Information System** to (a) investigate a specific occupation and its related alternatives and (b) explore groups of occupations related to their interests and abilities.

Show the students where the CIS materials are located and briefly review the use of these materials with them. You may want to use the "Touring the Career Information System" section of the **Career Information System Guide** as a guide.

Discuss the CIS materials with the students, using the following questions.

1. **Why are occupations organized by groups?**
   COMMENT: Occupations are generally organized by groups to show a relationship among occupations. Some grouping arrangements show a relationship as to the products developed or the services provided. The Worker Trait Groups are homogeneous clusters of occupations requiring similar worker characteristics for satisfactory job performance. They are also grouped by the general nature of the work performed. Occupations belonging to the same group provide students with related occupational alternatives.

2. **How can you use the Career Information System to find information about specific occupations?**
   COMMENT: Students can use the Alphabetical Card File, as well as the **Dictionary of Occupational Titles, Fourth Edition.**

3. **What source of information contains a brief description of each occupation?**
   COMMENT: The **Dictionary of Occupational Titles**, Fourth Edition.

4. **What sources of information are used to find the occupations belonging to each Worker Trait Group?**
   COMMENT: The most common occupations in each group are listed in the **Worker Trait Group Guide.**

5. **Why is it important to use more than one source of information about an occupation?**
   COMMENT: Different sources give different types of information. For example, the **Occupational Outlook Handbook,** published by the U.S. Department of Labor, includes forecast information on employment opportunities. Students should understand that some types of information are written for recruitment or other purposes which may provide a biased point of view.

CAREER EXPLORATION

Purpose

The purpose of the activities in this section is to help students use their interests, abilities and goals to identify groups of occupations for detailed exploration, and to make plans for pursuing their career exploration.

Equipment and Materials

Teachers will need:

- Filmstrip projector and cassette tape player
- FS/CASS "Examing Your Interests"
- FS/CASS "Work Activities"
- FS/CASS "Work Situations"
- FS/CASS "Credentials and Competencies: Get Ready, Get Set, Go"
- FS/CASS "What Are Aptitudes?"
- FS/CASS "Learning About Your Aptitudes"
- CASS "Sounds of Work" (Side 1) and "What Is My Occupation?" (Side 2)
- **School Subject — Occupation Index** (optional)

Students will need

- IACE booklet
- **Career Information System Guide**
- **Worker Trait Group Guide**
- **Worker Trait Group Index to Occupational Information**
- **File Content Notebook**
- Alphabetical Card File
- Supplement to the **Dictionary of Occupational Titles,** Fourth Edition

Presentation

Ask students to read and discuss the introductory paragraphs under the heading "Career Exploration" in their booklet.

Activity G — Expressed Interests
(1-1/2 class periods)

Ask students to read and discuss the definition of the term "interest" as described in their booklet. Then show the filmstrip, "Examining Your Interests."

HAPPINESS IS BUILDING THINGS ... FOR ME !

The filmstrip should help students to (a) develop an understanding of the way they can examine their interests, and relate them to occupations and other career activities and (b) realize that interests often change as people mature.

After the filmstrip presentation, use the following questions and comments to guide the discussion.

1. **The following questions may help students define their interests.**

   a. After the school day is over, what do you like to do?

   b. Do your hobbies take you indoors or outdoors?

   c. If you enjoy reading, what kinds of books or magazines do you read?

   d. If you were free to do whatever you wanted for one hour, what would you do?

   e. What would be your ideal weekend?

   f. What is your favorite school subject? Does it have to be the subject in which you obtain the best grades? Why, or why not?

   g. What movies do you like to watch? Television shows?

   h. What interests did you express in answering these questions?

   i. The students in the filmstrip took an interest survey. What do the results of such surveys show?

2. **What are some of the ways you can use to find what your interests are in various areas of work?**

   a. What kinds of books and materials can help you learn about the world of work?

   b. How could movies, television shows, or filmstrips help?

   c. How could a firsthand experience help?

   d. What can you learn by observing others in actual working conditions?

   e. How could listening to others describe their experiences help?

   f. What factors would you have to keep in mind?

   g. How could you use the results of an interest survey for occupational exploration?

   COMMENT: Some of the the students may have already used some of these methods. Encourage them to describe their experiences to the class.

3. **Why should you examine your interests when you plan your career? How can you relate your interests to your goals?**
   COMMENT: People tend to find the most satisfaction in work that relates closely to their interests and goals.

4. **Are your interests the same as five years ago? Why should you consider your present interests as you think about possible occupations?**
   COMMENT: The activities that held your attention five years ago are perhaps not the ones that absorb you today. As you consider occupations likely to prove satisfying, be sure your reference is to current occupations, and current interests.

5. **In the filmstrip, Cliff may pursue his interest in music and entertainment in different ways. What options does he have?**
   COMMENT: Cliff may choose to make entertaining his full-time or part-time occupation. Encourage students to project the possible consequences of either option.

6. **What are some of the interests of the students in the filmstrip? How could these interests relate to an occupation?**
   COMMENT: Some of the interests included riding a motorcycle, driving a car, reading books, drafting, dancing, physical education, building, playing games, working on televisions and in a machine shop, and playing professional ball. Ask the students to relate these interests to occupations.

7. **In the filmstrip, how did professional athletes and the counselor influence Jim's interests?**
   COMMENT: Jim was influenced by the glamour that professional athletes represent and the results of the interest survey. The counselor indicates through these results Jim's high interest in machine work and math.

8. **In the filmstrip, how did Terry's sister and her sister's friend influence Terry's interests?**
   COMMENT: Terry was influenced by her sister's beliefs and by listening to her sister's friend tell of her work experience.

9. **What occupations are women entering today that used to be held mostly by men?**

COMMENT: Discussion should bring out such occupations as doctor, dentist, school principal, lawyer, judge, engineer, construction worker, etc.

10. **What occupations are men entering today that used to be held mostly by women?**
COMMENT: Discussion should bring out such occupations as nurse, secretary, elementary teacher, telephone operator, flight attendant, etc.

11. **Are men and women entering occupations that used to be held by the opposite sex because their interests have changed? Why or why not?**
COMMENT: Discuss changes in society that influence changes in individuals.

12. **How do your interests differ from those of the students in the filmstrip?**
COMMENT: Let students discuss their interests.

13. **What people or events have influenced your interests? How?**
COMMENT: Have the students identify as many different people or events as possible — parents, friends, vacations, etc. Ask the students how they were influenced.

14. **What occupations are related to your interests?**
COMMENT: Ask the students to relate at least two occupations to each interest area. To avoid repetition, you may want to list the student's interest areas on the chalkboard and the corresponding occupations as the students identify them.

Help students follow the directions given in Activity G of their booklet. Be sure students understand how to mark their interest in Column 1 of the Worker Trait Group Selection Chart located at the back of their booklet.

83

WORK ≠ PLAY
WORK = PLAY
WHICH DO I
WANT TO DO
TODAY ?

Activity H — Work Activities

(2 class periods)

It is recommended that you review the "Work Activities Checklist Utilization Guide" on page 89 of this manual before presenting this activity.

Ask students to read the introductory paragraph in their IACE booklet, then show the filmstrip "Work Activities."

The filmstrip should help students to (a) develop an understanding of the ten types of activities related to the work people do, (b) become aware of the influence that workers' preferences for certain types of activities have on worker's job performance and satisfaction, and (c) become aware of their own likes and dislikes and the way they can use their preferences to explore occupations.

After the filmstrip presentation, use the following questions to guide the discussion. The responses to the following questions are likely to be subjective in nature since they deal with the students' preferences to the ten types of work activities. This is why there are no teacher's cues and suggestions following each question. It is important that the students feel free to express their opinions and feelings and that they respect those of others.

1. What personal experiences, in work or leisure, have you had with each of the ten types of activities?

2. What activities do you prefer?
3. Why do you prefer certain kinds of activities?
4. How can knowing what you like to do help you explore occupations?

Have students read the Work Activity Descriptions in the **Career Information System Guide.** Prior to writing down their own experiences, ask students to give you examples for each of the activity types to be sure they understand what they are to do.

Go over the instructions for the Work Activities Checklist, Part 1 and 2 with the students. Be sure they understand how to rank order their preferences.

Direct students to complete Column 2 of the Worker Trait Group Selection Chart located at the back of their booklet.

OPTION: This is a good point at which to introduce the use of the **Worker Trait Group Keysort Deck** for combining variables in career exploration. Full instructions on how to use the cards with different sorting logics are located in the **Career Information System Guide.**

Activity I — Work Situations

(2 class periods)

It is recommended that you review the "Work Situations Checklist Utilization Guide" on page 93 of this manual before presenting this activity.

Ask students to read the introductory paragraph in their IACE booklet, then show the filmstrip "Work Situations."

The filmstrip should help students to (a) develop an understanding of the ten types of situations which put demands upon workers, (b) become aware of the influence workers' adaptation to these demands has on the workers' job performance and satisfaction, and (c) become aware of the types of situations they prefer and want to avoid.

After the filmstrip presentation, use the following questions to guide the discussion. The responses to the following questions are likely to be subjective in nature since they deal with the students' preferences to the ten types of work situations. This is why there are no teacher's cues and suggestions following each question. It is important that the students feel free to express their opinions and feelings, and that they respect those of others. There are no right or wrong answers.

1. What personal experiences, in work or leisure, have you had with each of the types of situations?

2. What situations do you prefer? Why?

3. What situations do you want to avoid? Why?

4. How can knowing what situations you prefer help you explore occupations?

Have students read the Work Situation Descriptions in the **Career Information System Guide.** Prior to writing down their own experiences, ask students to give you examples for each of the situation types.

Go over the instructions for the Work Situation Checklist, Parts 1 and 2 with the students. Be sure they understand how to rank order their preferences.

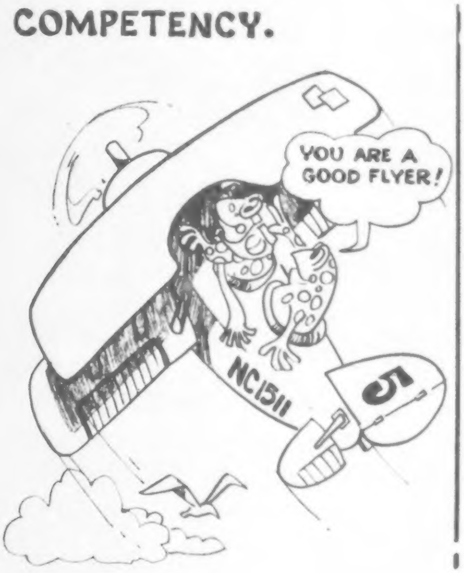
Direct students to complete Column 3 of the Worker Trait Group Selection Chart located at the back of their booklet.

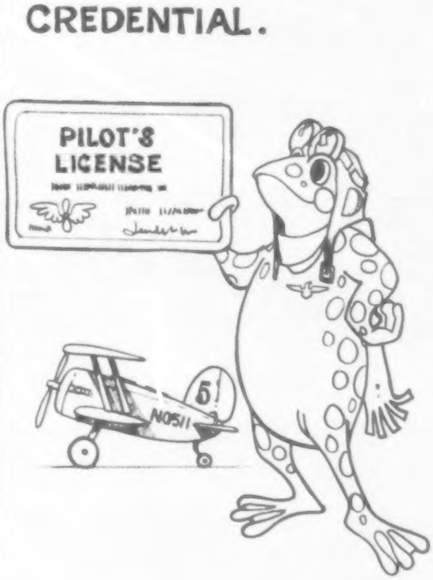
Activity J — School Subjects
(1-1/2 class periods)

It is recommended that you review the "School Subject — Worker Trait Group Chart and School Subject — Occupation Index Utilization Guide" on page 103 of this manual before presenting this activity.

Ask students to read the introductory paragraph in their IACE booklet, then show the filmstrip "Credentials and Competencies: Get Ready, Get Set, Go!"

The filmstrip should help students develop an understanding of (a) competency as what a person is able to do, (b) credential as what a person should be able to do, and (c) the ways competencies and credentials can be acquired and can affect obtaining and retaining a job.





After the filmstrip presentation, use the following questions and comments to guide the discussion.

1. **What kinds of credentials can a person acquire?**
COMMENT: The filmstrip gave the following examples: birth certificate, passport, blue ribbon, credit card, diplomas, theater tickets, etc.

2. **How can credentials be acquired?**
COMMENT: Taking a course, passing a test, winning a contest, paying a fee, etc.

3. **What credentials may be required by law?**
COMMENT: When the public safety is involved. Ask students to give specific examples.

4. **Why would an employer be interested in your credentials?**
COMMENT: To determine the best person available for the job.

5. **Will credentials help you keep a job once you get it? Why, or why not?**
COMMENT: Credentials show what a person should be able to do; competencies are what a person can do. Competencies, not credentials, help you keep a job.

6. **Is school the only place where competencies can be developed? Why, or why not?**
COMMENT: Each person has been acquiring certain competencies since birth. Therefore, competencies can be developed in many different places.

7. **What skills can you refine in school?**
COMMENT: This might include communicating with others, getting along with others, solving problems, and thinking critically, as well as acquiring skills specific to subject matter.

Assist students in using the School Subject-Worker Trait Group Chart. Show them an example of how they can use a school subject to find Worker Trait Groups to explore. (The chart and its instructions are located in the **Career Information System Guide**.)

Help students follow the directions given in Activity J of their booklet. After students have completed Columns 4 and 5 of the Worker Trait Group Selection Chart and Columns 1 and 2 of the Worker Trait Group Exploration Chart in their booklet, you may wish to explain the use of the **School Subject — Occupation Index.**

U.S.
1
MINIMUM SPEED
40
55
ONE WAY
BELTLINE NEXT EXIT
FOREST DRIVE 2
90
25
STOP
DETOUR

Activity K — Aptitudes

(3 class periods)

It is recommended that you review the "Aptitudes Checklist Utilization Guide" on page 98 of this manual before presenting this activity.

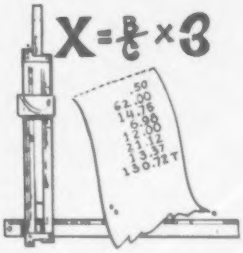
Ask students to read the introductory paragraph in their IACE booklet, then show the filmstrip "What Are Aptitudes?"

COUNSELOR
DICTIONARY
DAILY NEWS

The filmstrip should help students develop an understanding of (a) aptitude as the ease or quickness with which a person can learn a certain type of knowledge or skill, and (b) the ways in which they can identify their own aptitudes.

Aptitude is an attempt to assess the relative ease or difficulty one might expect when learning new knowledge or skills. Aptitude is not a measure of what a person can or cannot do. Students should recognize that interest and motivation can help them overcome learning difficulties.

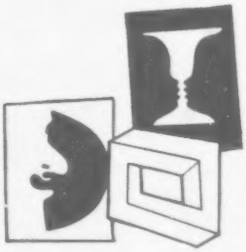
After the filmstrip presentation, use the following questions and comments to guide the discussion.


X = B/C × 3
.50
62.00
14.76
6.98
12.50
2.12
23.37
130.72T

1. **Explain the meanings of achievement, ability, and aptitude.**
   COMMENT: Help the students define these three words. Achievement is what you have done. Ability is what you can do. Aptitude is what you can learn to do. These words describe the past, present, and future of the same personal characteristic.

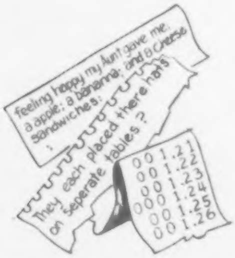
2. **What kinds of aptitudes are needed for achievement in certain school subjects? What kinds of aptitudes are helpful in school activities such as clubs, sports, etc.?**
   COMMENT: Ask students to be specific in their responses.

3. **What evidences of aptitudes can you identify in your achievements (past)? What evidences can you identify through your abilities (present)?**
   COMMENT: Students may need help in articulating what they can learn to do. Remind them that aptitudes are not confined to academic learning.



4. **How can you use the concept of aptitudes when selecting school subjects? Selecting recreational activities? Do you think there is a relationship between what you like to do and what you can do well? Explain your answer.**
   COMMENT: Most people seem to like to do what they can do well. Students are often motivated to learn what they think they can complete successfully.

5. **Could you have aptitudes of which you may be unaware? How might you learn about them? What school subjects or activities might help you identify your aptitudes in particular areas?**
   COMMENT: A person could have aptitudes related to fields in which they have no experience. For example, one might have aptitudes related to music, but be unaware of them because one has had little experience in music.

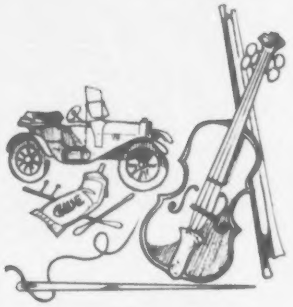

feeling happy my Aunt gave me a apple; a banana; and 8 Cheese sandwiches;
They each placed there hats on seperate tables?
00 1.21
00 1.22
00 1.23
000 1.24
00 1.25
00 1.26

Furniture Sale

Show the filmstrip "Learning About Your Aptitudes." This filmstrip explains how students can estimate their own aptitudes, using the aptitude types and levels defined by the U.S. Department of Labor.

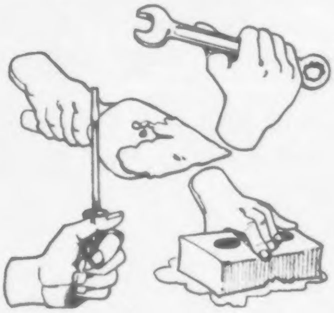
The filmstrip should help students to (a) identify their own aptitudes by examining their achievements and present abilities and (b) become aware of the way they can use their aptitudes to explore occupations.

After the filmstrip presentation, use the following questions and comments to guide the discussion.



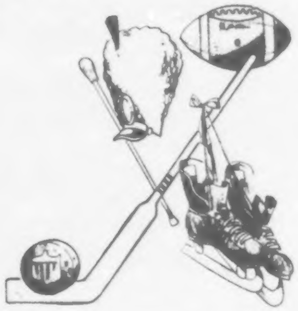
1. **Explain the advantages of using the** Dictionary of Occupational Titles' **aptitude categories to estimate your aptitudes instead of such expressions as "musical aptitude" or "drawing aptitude."**
   COMMENT: If you estimate your aptitudes in terms of the **Dictionary of Occupational Titles'** structure, you can relate your aptitudes to specific groups of occupations.

2. **Suppose you have a high level in a certain aptitude. Does this mean you will be successful in occupations involving that aptitude? Explain your answer.**
   COMMENT: Aptitudes must be used to develop abilities if they are to contribute to job performance. There are many factors other than aptitudes (interests, motivation, opportunities, values) that affect job performance.



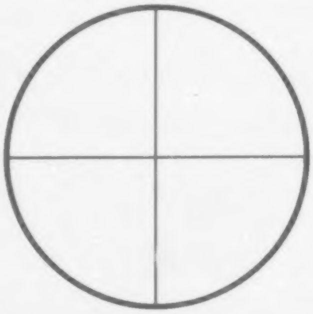
3. **Suppose your estimate of a certain aptitude is lower than the significant aptitude level needed for an occupation. What should you do?**
   COMMENT: Interest and motivation may help the individual overcome difficulties in learning the required skills and knowledge. Further, an aptitude estimate based on limited evidence may not be accurate. Students should never bypass the exploration of an occupation on the basis of an aptitude estimate alone.

Ask students to read the aptitude descriptions and clues located in the **Career Information System Guide** and discuss their own experiences with each type of aptitude.



Assist students in completing the Aptitude Self-Estimate Record located in their IACE booklet. The aptitude estimates are indicators of the ease with which students can develop abilities. However, they may be misleading. If a student has had a great deal of experience in performing certain tasks, the estimate might be too high. But if he or she has had little experience in an area, his or her estimate might be too low.

Direct students to follow the directions given in their booklet to complete Column 3 of the Worker Trait Group Exploration Chart. You may wish to demonstrate how students can run the top edge of the Aptitude Self-estimate Record along the Aptitudes Index located in the **Career Information System Guide.** Remind students that the information provided by the index is to be used only in a general way, as specific occupational requirements may differ. These differences may include either an additional aptitude for an occupation, or fewer aptitudes for an occupation than for the Worker Trait Group.



Ask students to read and discuss the summary points located at the end of Activity K in their booklet. The levels of aptitudes required for occupations usually do not vary significantly from the levels required for the Worker Trait Group.

Activity L — Other Factors
(1-1/2 class periods)

This activity deals with other factors which are useful in exploring occupations such as social and physical surroundings.

I. Ask students to read the introductory paragraph in their IACE booklet, then play the tape "What is My Occupation?"

The cassette should help students become aware that (a) some occupations may have similar social and physical surroundings, (b) others may have similar work tasks, and (c) the particular combination of these and other factors is what makes occupations differ.

Students will listen to fifteen different sketches on occupations. Each sketch contains clues to the identity of the occupation without revealing any specifics. These clues are very general at first and get more revealing toward the end of the sketch. The activity is designed as a game for students' enjoyment and incentive. Remind students that the spirit of competition should not prevent them from respecting others' feelings and opinions. Direct students to follow the directions given in the tape's introduction. Play the tape. After students have heard the first series of clues, stop the cassette at the tone. Ask them to write down the title of the occupation they think is described by the clues next to the number "1" in the blank provided in their booklet. Repeat the process for all fifteen sketches. Direct students to exchange booklets. Write on the chalkboard the following answer key: (1) cartoonist, (2) principal, (3) secretary, (4) bank teller, (5) archaeologist, (6) cook, (7) fire fighter, (8) actor, (9) farmer, (10) podiatrist (foot doctor or specialist), (11) cosmetologist (beautician or hair stylist), (12) flight attendant, (13) motion picture projectionist, (14) sewing machine operator, (15) wild animal trainer.

Through a show of hands, find out how many students correctly guessed each occupation. Write each number of correct answers next to the corresponding occupation on the chalkboard. The occupation with the lowest number of correct answers is declared the "winning" occupation.

Ask students to check the booklet in front of them with the answer key on the chalkboard. Direct them to tabulate the total number of correct answers. The student with the highest number of correct answers is declared an "occupational specialist."

Discuss the game's results and the reasons for student's discrepant answers. Use the following questions and comments as a discussion guide.

1. **What were some examples of social surroundings that were given as clues?**
COMMENT: Work alone; part of a team; self-employed; laws and regulations to be followed.

2. **What physical surroundings were used as clues?**
COMMENT: Indoors; outdoors; dirty; well-lighted; physical exertion.

3. **In what ways are occupations similar?**
COMMENT: Occupations may have some similar tasks and physical and social surroundings.

4. **What makes occupations unique or one of a kind?**
COMMENT: The particular combination of factors such as tasks, physical and social surroundings, interests, and abilities.

5. **What clues in the occupation's description led you to identify the occupation you named? To what other occupations could these clues apply?**
COMMENT: This part of the discussion is designed to help students pinpoint the clues that might have led them to name other, but similar, occupations. For example, students might have named the following occupations: (1) syndicated columnist, (2) janitor, (3) lifeguard, (4) fast food server, (5) historian, (6) carpenter, (7) physical laborer, (8) puppeteer, (9) construction laborer, (10) shoe salesperson, (11) dog groomer, (12) waiter/waitress, (13) radio announcer, (14) assembler, (15) dentist.

II. As one of the physical factors affecting job satisfaction, students should become aware of the kind and amount of noise to which workers are exposed in different occupations.

Write on the chalkboard the following titles of occupations. Ask students to read the titles and think about the sounds associated with each occupation. If students cannot name the occupation, they may name the setting.

a. Commercial clothes presser
b. Grocery clerk
c. Carpenter
d. Dentist
e. Printer
f. Jackhammer operator
g. Playground director
h. Truck driver
i. Auctioneer
j. Gravel plant operator
k. Musician
l. Airline pilot
m. Typist
n. Traffic Officer
o. Bookkeeper

Inform the students that the sounds associated with the occupational titles on the chalkboard are arranged in a different order on the tape to which they are going to listen. Direct students to write the occupational titles corresponding to the sounds in the order they hear them on the tape in the blanks provided in their booklet. For example, if a students thinks that the first sound corresponds to a musician's work setting, the student is to write: "1. musician."

Play the "Sounds of Work" tape. Allow the students enough time to write down their answers between sounds.

Play the tape again and ask students to name the occupation associated with each sound. The correct answers are: (1) dentist, (2) bookkeeper, (3) grocery clerk, (4) gravel plant operator, (5) airline pilot, (6) jackhammer operator, (7) auctioneer, (8) musician, (9) commercial clothes presser, (10) traffic officer, (11) carpenter, (12) typist, (13) printer, (14) truck driver, (15) playground director.

Lead a class discussion on the importance of sound in work settings. Students' responses will vary, depending on individual preferences. Use the following questions as a guide.

1. What noises would you like to work with? Why?
2. What noises would you not want to work with? Why?
3. Are your likes and dislikes the same as those of others in the class? Why, or why not?
4. What are the noises associated with your work setting — the school? Which noises do you like? Which do you dislike?
5. Would you accept or refuse a job on the basis of the sound involved? Why, or why not?

III. Ask students to complete Columns 4 through 7 of the Worker Trait Group Exploration Chart in their IACE booklet. Help them locate the information they need in the **Worker Trait Group Guide.**

Activity M — Occupational Exploration
(3 class periods)

Direct students to examine the information they have compiled on the Worker Trait Group Exploration Chart of their IACE booklet. From the information they have, they should select the Worker Trait Groups they wish to explore at the occupational level. It is important they they look at the groups which involve the factors they value most, not simply those groups which involve the greatest number of factors they prefer. Thus, students may decide to explore a group which involves only one or two of the factors they prefer, if those factors are the ones that are most important to them. Have students complete Column 8 of the chart.

After students have selected groups to explore at the occupational level, be sure they have access to the materials of the **Career Information System.** Help students complete the Occupation Exploration Sheet located in their booklet. Make sure they understand each of the information categories included on the sheet. You may wish to have students work on this activity outside class. If so, be sure they have access to the **Career Information System.**

SUMMARY

Direct students to read the summary and to discuss the instructions for completing the Summary Chart in their IACE booklet.

Ask students to discuss what they have learned about themselves and about occupations. Each student should be able to identify school courses he or she can take to work towards his or her career goals. In addition, students should be able to describe other activities they can pursue (reading, extracurricular activities, hobbies, part-time or summer work) which will help them prepare for or explore further the occupations in which they are interested.

Students should have a clearer understanding of their goals, their interests, and their abilities, and be able to relate them to occupations. They should use this information in career exploration.

Further, they should be familiar with the four phases of the learning process (understanding a concept, personalizing it, assessing self in relation to it, and applying the concept) as they relate to the concepts presented in these activities. Their ability to use these concepts and understand the process will help them in the lifelong process of career exploration. Though the concepts are relatively stable, students' interests and the nature of work opportunities will change, and the students need to continuously assess themselves in relation to the world of work.

WORK ACTIVITIES CHECKLIST UTILIZATION GUIDE

INTRODUCTION

Everyone has preferences for certain types of activities. The same type of activity can be found in a variety of settings, including leisure, nonpaid work, and job tasks. Since interests are known to be a critical factor in career satisfaction, awareness of one's preferences can be extremely helpful in career exploration.

Preferences are based on experiences. Students have had many experiences in school, leisure, and nonpaid work. However, their occupational experience is usually limited. The tasks workers do in their jobs involve many different kinds of activities, but these activities can be classified into ten basic types. These types of activities may be used to describe not only the workers' tasks, but all other activities as well, such as leisure, hobbies, and nonpaid work. So, by defining their preferences for types of activities on the basis of their own experiences and feelings, students can identify groups of occupations whose significant tasks fall into their preferred types of activities.

The ten types of work activities are derived from the Interest Factors contained in the **Dictionary of Occupational Titles** (DOT), Volume II, Third Edition, 1965. These Interest Factors are one of the bases upon which the homogeneous clusters of occupations known as Worker Trait Groups were formed. The Interest Factors of the DOT were organized as five bipolar pairs. The bipolarity of the Interest Factors means that the presence of one suggests the absence of the other. Job analysts identified the predominant Interest Factors related to satisfactory performance in occupations. If one factor of a biopolar pair was identified as more important, the other was automatically rejected.

Although occupations may be rated as predominantly involving one factor to the exclusion of its paired factor, individual's interests need not be bipolar. Thus, in the **Career Information System** developed by the Appalachia Educational Laboratory, the Interest Factors are treated independently, eliminating their bipolarity. In addition, they are called "Work Activities" rather than Interest Factors, since each factor is defined as a preference for a type of activity.

To help you emphasize the **internal** assessment approach of the CIS access materials, use the four phases of learning to present the **Work Activities Checklist** in the following way:

Phase 1 — students develop an **understanding** of the concept through a general introduction, a filmstrip, and definitions of the work activities.

Phase 2 — students **personalize** the concept by relating their own experiences to each type of work activity.

Phase 3 — students **assess** themselves in relation to the work activities by completing a checklist which helps them define their preferences. They clarify and sort the work activities to identify those most meaningful to them as individuals.

Phase 4 — students **apply** the concept by identifying Worker Trait Groups to explore on the basis of their work activity preferences. Subsequent exploration of these groups allows them to refine their preferences. Thus, their career exploration is an interactive process of self and occupational exploration.

PRESENTATION

Your role as leader is one of organizing the sessions, motivating the students, and facilitating the learning process. Learning is the responsibility of the learner. Students must be allowed and encouraged to assume this responsibility and to apply the learning process to their career exploration and decision-making.

Equipment and Materials

Leaders will need:

- **Work Activities Checklist**
- Filmstrip projector and cassette tape player
- FS/CASS "Work Activities"

Students will need:

- **Work Activities Checklist** (1 per student)
- **Career Information System Guide** (1 per student)
- **Worker Trait Group Guide** (10 per class)
- **Worker Trait Group Keysort Deck** (optional)

Time

Presentation of the checklist requires approximately four 50-minute class sessions. If you do not have this much time, some activities may be assigned for completion between sessions. This time allotment assumes that students have been oriented to the **Career Information System.** If not, an additional introductory session should be scheduled to use the "Touring the Career Information System" section of the **Career Information System Guide.**

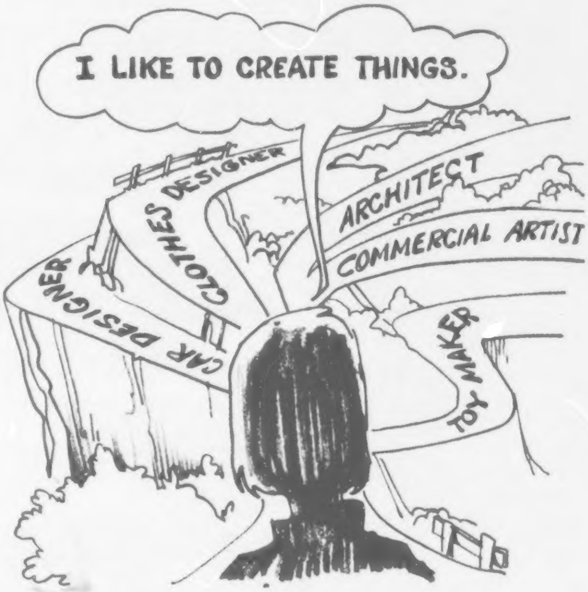
Overview

The overview shows the suggested presentation of the activities by class sessions.

SESSION	ACTIVITIES	OPTIONS
One	• introduction • filmstrip and discussion	
Two	• relating personal experiences to work activities	• recording personal experiences with work activities
Three	• rating and rank ordering work activity preferences	
Four	• identifying Worker Trait Groups related to activity preferences • exploring preferred Worker Trait Groups in the **Worker Trait Group Guide.**	• **Worker Trait Group Keysort Deck** • group exploration

SESSIONS

Familiarize yourself with the information in this section before presenting the activities to students. As you review this section, think of other learning objectives you may wish to integrate. For example, one career guidance objective might be to reduce occupational stereotyping. The filmstrip responds to this objective by presenting men and women in nontraditional occupational roles. You could add discussion questions on stereotyping. In addition, you might ask students to develop a bulletin board display. The display could be organized around the ten work activity types, with pictures and articles showing people in nontraditional roles under each activity type.



Session One

Discuss the introductory paragraph of the **Work Activities Checklist** with the students, then show the filmstrip "Work Activities."

The filmstrip should help students (a) develop an understanding of the ten types of activities related to the work people do, (b) become aware of the influence that workers' preferences for certain types of activities have on workers' job performance and satisfaction, and (c) become aware of their own likes and dislikes and the way they can use their preferences to explore Worker Trait Groups and occupations.

After the filmstrip presentation, use the preceding student objectives as well as the following items to guide the discussion.

1. Just as there are many differences in people, there are many differences in jobs — settings, worker tasks, work activities, etc.
2. Although there are vast differences in people and in their jobs, there are also many similarities. People may have similar interests and preferences. Jobs may have similar settings, tasks, and work activities.
3. Interests and preferences are based upon experiences. People's interests may change with new experiences and are more stable in adulthood than during adolescence.
4. There are ten broad types of work activities. These activities apply to occupations as well as leisure and nonpaid work.
5. People have preferences for certain types of activities.
6. Jobs are **not** limited to just one type of work activity. Some are complex and involve the worker in several different types of activities.
7. The work activity types related to each Worker Trait Group are **only** the significant ones related to satisfactory job performance. Workers employed in occupations belonging to the Worker Trait Groups may be involved in other activities, but these activities are not considered to be significantly related to job performance.
8. All occupations belonging to each Worker Trait Group do not necessarily involve workers in all of the activity types listed with the group.

The primary focus of Session One should be on **understanding** the concept (the first learning phase). The filmstrip and discussion should be geared to meeting this learning objective.

Session Two

Ask students to read the Work Activity Descriptions in the **Career Information System Guide.** You may wish to direct students to discuss each description one at a time or discuss them all at the end. The purpose of the discussion is to help students relate their personal experiences to the ten types of work activities. Examples of discussion questions that can be used to help students **personalize** the concept are:

1. What kind of experiences have you had which are related to each of the ten types of activities?
2. Which types of activities did you enjoy most?
3. Why do you prefer certain types of activities?

If your class is large, you may wish to break it into small discussion groups so that each student has an opportunity to participate. In this case, you should have a copy of the discussion questions for each group or write them on the chalkboard.

You can follow up on the issue of stereotyping by having students examine their own experiences to see if they were stereotyped.

Option: Ask students to write down their experiences related to each type of work activity. This could be done outside of class or in conjunction with reading the Work Activity Descriptions. You may wish to develop a form on which students can record their experiences, listing the ten types of work activities with space under each. If you use this option, discuss the completed forms in class. Students' discussion of their experiences may assist others in recalling the same or similar experiences. Also, such discussion helps to illustrate the different kinds of experiences and interests people have.

The primary focus of Session Two should be on **personalizing** the concept (the second learning phase).

Session Three

Ask students to read and follow the directions given in Part II of the **Work Activities Checklist.** Review the directions given for completing the checklist with the students. Make sure students understand that the checklist is **not** a test; rather, it is a means to help them organize their preferences for the different types of activities in order to relate them to Worker Trait Groups.

Part 1 of the checklist helps students analyze and rate their feelings about each type of work activity. Then, in Part 2, they use these ratings to rank order their preferences. Be sure students understand that the activity numbers (1-10), not the rating scale numbers (+2 to −2), are used for rank ordering.

After students have completed the checklist, encourage them to express why they like or dislike particular activities. Help students determine whether their preferences are based on limited or atypical experiences.

NOTE: If time is available, you may wish to start the activities scheduled for Session Four in this session.

The primary focus of Session Three should be on helping students **assess** themselves in relation to the concept (the third learning phase).

Session Four

Ask students to read the directions given in Part III of the **Work Activities Checklist.** Review these directions carefully with the students. If possible, demonstrate how students should complete each step.

In this session, students identify the Worker Trait Groups related to their activity preferences (Steps A and B of the directions), and then they explore those Worker Trait Groups (Steps C and D of the directions). When students have identified Worker Trait Groups they want to explore further (Step E of the directions), encourage them to explore at the occupational level, using the CIS materials on their own. Be sure students are aware that the Worker Trait Groups they identify as related to their preferences may also be related to work activities they dislike.

NOTE: If the number of copies of the **Worker Trait Group Guide** is limited, you should have students go through Steps A and B for more than one choice and wait for a **Worker Trait Group Guide** to become available before going on to Steps C and D. There should be copies of the **Career Information System Guide** and the **Worker Trait Group Guide** available in the career resource center or area where the occupational information is kept. Arrangements should be made so that students can continue to use these materials outside of class.

It is important that students understand that using their preferences for work activities is only one part of career exploration. Discuss the other factors described in Worker Trait Groups, and suggest that they explore them as well. If you are using other access variables such as work situations and aptitudes, you may wish to keep student exploration at the Worker Trait Group level until you introduce the use of all the variables, and then have students explore at the occupational level.

Options: (1) You may want students to use the **Worker Trait Group Keysort Deck** to identify Work Trait Groups related to their work activity preferences. Some students could use it during Sessions Three or Four, or outside of class. (The limited number of decks does not make it usually feasible for an entire class to use them in the same session.) Full instructions on the use of the **Worker Trait Group Keysort Deck** are located in the **Career Information System Guide.**

(2) To encourage students to continue their career exploration, help them form groups interested in the same Worker Trait Groups or occupations. Some schools have career clubs already formed, or your students may wish to begin one. You might set up a special bulletin board on which students can list their interests and ask those with similar concerns to sign up.

The primary focus of Session Four should be on **applying** the concept (the fourth learning phase).

Conclusion

At this point, students should have a thorough understanding of the work activities, and they should be able to use their preferences in career exploration. Further, they should be familiar with the four phases of the learning process (understanding, personalization, self-assessment, and application) as they use the concept of work activities for career exploration. Their ability to use the concept and understand the process will help them use work activities and other factors as guides in the lifelong process of career exploration. Although the concept of work activities stays the same, students' interests and the nature of work opportunities will change. Therefore, the students will need to continuously assess themselves in relation to the world of work.

WORK SITUATIONS CHECKLIST UTILIZATION GUIDE

INTRODUCTION

Career exploration activities often focus on the tasks performed by workers. But most job failures are related to difficulty with adaptive skills, rather than with the work tasks. Every job involves situations to which the worker must adapt to assure satisfactory performance. Thus, awareness of one's ability and willingness to adapt to particular situations is critical to career satisfaction.

There are two categories of situations which call for adaptive skills. The first consists of situations unique to a particular place of work. This category includes three types of adaption: (1) in interpersonal relations. (2) to regulations, and (3) to the physical surroundings of the job. While skills in adapting to situations specific to a job are extremely important to job satisfaction, they do not form a useful vehicle for career exploration.

The second category of situations deals with demands that are common to all jobs in a particular occupation and to occupations in particular Worker Trait Groups. In fact, homogeneity of work situations was one of the bases used to form the Worker Trait Groups. The work situations to which workers must adapt can be classified into ten basic types. These types of work situations may be used to describe not only the demands of work settings, but also the demands of leisure, school, and nonpaid work settings. So, by defining their preferences for types of situations on the basis of their own experiences in other settings, students can identify groups of occupations that have significant work situations to which they are willing and able to adjust.

The ten types of work situations are derived from the twelve Temperament Factors contained in the **Dictionary of Occupational Titles,** Volume II, Third Edition, 1965. Temperaments were defined as "those personality qualities which remain fairly constant and reveal a person's intrinsic nature." (U.S. Department of Labor, Fact Sheet No. 3 on Functional Occupational Classification Project, 1957). Information on these qualities was formulated into "temperaments." Occupational analysts then examined several hundred occupational descriptions to identify the situations which appeared to require significant worker adjustment in relation to the temperaments. When the analysts agreed that certain kinds of situations called for certain temperaments, these situations were grouped. A statement summarizing the situations was used to designate and define each Temperament Factor.

The occupations in the **Dictionary of Occupational Titles** (Third Edition) were rated, with the Temperament Factors most important to satisfactory adjustment in a specific occupation designated as qualifications for that occupation. Along with other factors, common temperament ratings were used as a basis for forming the homogeneous clusters of occupations which make up the Worker Trait Groups.

When the **Dictionary of Occupational Titles** was revised (Fourth Edition, 1978) two Temperament Factors were dropped as no longer meaningful, reducing the number to ten.

Although the Temperament Factors were initially defined using personality data, their function is to type work settings, not individuals. In the **Career Information System,** the Temperament Factors have been adapted and defined as "Work Situations," to aid students in focusing on the demands of the work setting, rather than on personality types.

To help you emphasize the **internal** assessment approach of the CIS access materials, use the four phases of learning to present the **Work Situations Checklist** in the following way:

Phase 1 — students develop an **understanding** of the concept through a general introduction, a filmstrip, and definitions of work situations.

Phase 2 — students **personalize** the concept by relating their own experiences with each type of work situation.

Phase 3 — students **assess** themselves in relation to the work situations by completing a checklist which allows them to define their preferences. They clarify and sort the work situations to identify those most meaningful to them as individuals.

Phase 4 — students **apply the concept** by identifying Worker Trait Groups to explore on the basis of their work situation preferences. Subsequent exploration of these groups allows them to refine their preferences. Thus, their career exploration is an interactive process of self and occupational exploration.

PRESENTATION

Your role as leader is one of organizing the sessions, motivating the students, and facilitating the learning process. Learning is the responsiblity of the learner. Students must be allowed and encouraged to assume this responsibility and apply the learning process to their career exploration and decision-making.

Equipment and Materials

Leaders will need:

- **Work Situations Checklist**
- Filmstrip projector and cassette tape player
- FS/CASS "Work Situations"

Students will need:

- **Work Situations Checklist** (1 per student)
- **Career Information System Guide** (1 per student)
- **Worker Trait Group Guide** (10 per class)
- **Worker Trait Group Keysort Deck** (optional)

Time

Presentation of the checklist requires approximately four 50-minute class sessions. If you do not have this much time, some activities may be assigned for completion between sessions. This time allotment assumes that students have been oriented to the **Career Information System.** If not, an additional introductory session should be scheduled to use the "Touring the Career Information System" section of the **Career Information System Guide.**

Overview

The overview shows the suggested presentation of the activities by class sessions.

SESSION	ACTIVITIES	OPTIONS
One	• introduction • filmstrip and discussion	• roleplay
Two	• relating personal experiences to work situations	• discussing changes in work settings, recording personal experiences with work situations
Three	• rating and rank ordering work situation preferences	
Four	• identifying Worker Trait Groups related to preferred situations • exploring preferred Worker Trait Groups in the **Worker Trait Group Guide.**	• Worker Trait Group Keysort Deck • group exploration

SESSIONS

Familiarize yourself with the information in this section before presenting the activities to students. As you review this section, think of learning objectives you may wish to integrate. For example, one career guidance objective might be to increase students' awareness of and control over change in work settings. The filmstrip segment between Susie and the druggist who fired her can be used as a basis for a roleplay activity, to explore the kinds of change possible within a particular work setting.

Session One

Discuss the introductory paragraph of the **Work Situations Checklist** with the students, then show the filmstrip "Work Situations."

The filmstrip should help students (a) develop an understanding of the ten types of situations which create demands upon workers, (b) become aware of the influence that worker's ability and willingness to adapt to these demands has on their job performance and satisfaction, and (c) become aware of the types of situations they prefer, and the types they wish to avoid.

After the filmstrip presentation, use the preceding student objectives as well as the following items to guide the discussion.

1. All jobs involve situations to which workers must adapt in order to maintain job performance.
2. All jobs involve situations specific to each (interpersonal relations, regulations, physical surroundings) as well as situations common to groups of occupations (work situations) to which the worker must adapt.
3. There are ten broad types of work situations. These apply to occupations as well as to leisure and nonpaid work.
4. People differ in their adaptive skills, in their ability and willingness to cope with the various types of situations.
5. More than one type of work situations may apply to any job. Jobs which involve individuals' preferred situations may also involve situations they wish to avoid.
6. The types of work situations related to each Worker Trait Group are **only** the significant ones related to job performance. Workers employed in occupations belonging to the Worker Trait Groups may be involved in other work situations, but adapting to these situations is not considered to be significantly related to job performance.
7. All occupations belonging to each Worker Trait Group do not necessarily involve workers in all of the work situations listed with the group.

You may wish to introduce the concept of change within work settings. When a worker enters a work setting, he or she may find it satisfying. The worker may perform at once in a satisfying manner. Usually, however, some adaption is required. It may take one of three forms:

- The worker may change to adapt to the setting.
- The setting may change to adapt to the worker.
- The worker and the setting may both change.

The work setting may not be satisfying. The worker may not perform in a satisfying manner. In such cases, the worker may leave the setting or the situation may be tolerated. In most cases, both the worker and the setting change.

Option: Use the filmstrip characters, Susie and the druggist, as a basis for a roleplay activity. Ask students to think of changes Susie and the druggist could make to resolve their conflicts, then act them out. Be sure that changes both in Susie's behavior and in the druggist's are represented in the solutions. Try to draw out changes in which the characters do not give up values important to them. Ask students to discuss the changes in terms of the adaption required, e.g. in interpersonal relations, regulations, or physical surroundings.

The primary focus of Session One should be on **understanding the concept** (the first learning phase). The filmstrip and discussion should be geared to meeting this learning objective.

Session Two

Ask students to read the Work Situation Descriptions in the **Career Information System Guide.** You may wish to direct students to discuss each description one at a time or discuss them all at the end. The purpose of the discussion is to help students relate their personal experiences to the ten types of work situations. Examples of discussion questions that can be used to help students **personalize** the concept are:

1. What kind of experiences have you had which are related to each of the ten types of situations?
2. Which types of situations do you prefer? Why?
3. What situations do you want to avoid? Why?
4. Give examples of how you respond to situations which are specific to a setting, such as home, school, or in community activities. Describe your adaptive skills.

If your class is large, you may wish to break it into small discussion groups so that each student has an opportunity to participate. In this case, you should have a copy of the discussion questions for each group or write them on the chalkboard.

You can follow up on the issue of change by having students examine their own experiences to see how change occurs.

Options: (1) Students' primary work setting is the school. Discuss how this setting has changed, using the following questions as a guide.

a. What changes, if any, have occurred in the physical environment? Who made the changes? Who benefited from the changes?

b. What changes have occurred in the regulations? Who made the changes? Who benefited from the changes?

c. What changes have occurred in interpersonal relations? Who made the changes? Who benefited from the changes?

d. Did any of the changes make the setting less comfortable for you or others? How?

e. What changes would you like to see happen in your work setting? How could you accomplish them? If the changes were made, how would they affect the others in your work setting? What changes could you make personally to make the work setting better for others?

(2) Have students write down their experiences related to each type of situation. This could be done outside of class or in conjunction with reading the Work Situation Descriptions. You may wish to develop a form on which students can record their experiences, listing the ten types of work situations with space under each. If you use this option, discuss the completed forms in class. Students' discussion of their experiences may assist others in recalling the same or similar experiences. Also, such discussion helps to illustrate the different kinds of experiences and interests people have.

The primary focus of Session Two should be on **personalizing** the concept (the second learning phase).

Session Three

Ask students to read and follow the directions given in Part II of the **Work Situations Checklist.** Review the directions given for completing the checklist with the students. Make sure students understand that the checklist is **not** a test; rather, it is a means to help them organize their preferences for the types of situations in order to relate them to Worker Trait Groups.

Part 1 of the checklist helps students analyze and rate their feelings about each type of work situation. Then, in Part 2, they use these ratings to rank order their preferences. Be sure students understand that the situation numbers (1-10), not the rating scale numbers (+2 to −2), are used for rank ordering.

After students have completed the checklist, encourage them to express why they like or dislike particular situations. Help students determine whether their preferences are based on limited or atypical experiences.

Note: If time is available, you may wish to start the activities scheduled for Session Four in this session.

The primary focus of Session Three should be on helping students **assess** themselves in relation to the concept (the third learning phase).

Session Four

Ask students to read the directions given in Part III of the **Work Situations Checklist.** Review these directions carefully with the students. If possible, demonstrate how students should complete each step.

In this session, students identify the Worker Trait Groups related to their situation preferences (Steps A and B of the directions), and then they explore those Worker Trait Groups (Steps C and D of the directions). When students have identified Worker Trait Groups they want to explore further (Step E of the directions), encourage them to explore at the occupational level, using the CIS materials on their own. Be sure students are aware that the Worker Trait Groups they identify as related to their preferences may also be related to work situations they dislike.

Note: If the number of copies of the **Worker Trait Group Guide** is limited, you should have students go through Steps A and B for more than one choice and wait for a **Worker Trait Group Guide** to become available before going on to Steps C and D. There should be copies of the **Career Information System Guide** and the **Worker Trait Group Guide** available in the career resource center or area where the occupational information is kept. Arrangements should be made so that students can continue to use these materials outside of class.

It is important that students understand that using their work situation preferences is only one part of career exploration. Discuss the other factors involved in Worker Trait Groups, and suggest that they explore them as well. If you are using other access variables such as work activities and aptitudes, you may wish to keep students exploration at the Worker Trait Group level until you introduce the use of all the variables, and then have students explore at the occupational level.

Options: (1) You may want students to use the **Worker Trait Group Keysort Deck** to identify Worker Trait Groups related to their work situation preferences. Some students could use it during Sessions Three or Four, or outside of class. (The limited number of decks does not make it usually feasible for an entire class to use them in the same class session.) Full instructions on the use of the **Worker Trait Group Keysort Deck** are located in the **Career Information System Guide.**

(2) To encourage students to continue their career exploration, help them form groups interested in the same Worker Trait Groups or oc-

cupations. Some schools have career clubs already formed, or your students may wish to begin one. You might set up a special bulletin board on which students can list their interests and ask those with similar concerns to sign up.

The primary focus of Session Four should be on **applying** the concept (the fourth learning phase).

Conclusion

At this point, students should have a thorough understanding of the work situations as they relate to groups of occupations, and of the situations relevant to specific settings: regulations, interpersonal relations, and physical surroundings. They should be able to use their preferences in career exploration. Further, they should be familiar with the four phases of the learning process (understanding, personalization, self-assessment, and application) as they use the concept of work situations for career exploration. Their ability to use the concept and understand the process will help them use work situations and other factors as guides in the lifelong process of career exploration. Although the concept of work situations stays the same, students' interests and the nature of work opportunities will change. Therefore the students need to continuously assess themselves in relation to the world of work.

APTITUDES CHECKLIST UTILIZATION GUIDE

INTRODUCTION

Career exploration is a process of defining what one likes to do (interests), what one can learn to do (abilities and aptitudes) and what is important to one (values). Occupations which involve one's interests, abilities, and values are those most likely to provide career satisfaction. Interests and values are not sufficient for identifying satisfactory occupational alternatives: it is necessary that the inidividual be able to perform or learn to perform the job tasks.

Since specific job tasks are rarely learned in school, students need to be able to project their capacity for learning those tasks. The concept of aptitudes provides a framework for this projection.

Aptitude is the ease or quickness with which a person can learn new tasks. There are many different kinds of aptitude, some of which relate to knowledge, some to skills, and some to perception. Everyone has some level of each type of aptitude, thus it is not accurate to say "I have no aptitude for it." The activities in the **Aptitudes Checklist** are designed to help students assess the relative ease or difficulty with which they can expect to learn the tasks associated with particular occupations. Students should recognize, however, that interest and motivation can help them to overcome learning difficulties. Further, it should be clearly understood that aptitude estimates based on limited evidence may not be accurate. An aptitude estimate alone should not determine whether students explore an occupation. Aptitude information is extremely helpful in confirming occupational interests.

The **Aptitudes Checklist** is intended to assist students estimate the amount of aptitude they have in each of the eleven aptitude categories defined by the U.S. Department of Labor. These aptitudes fall into three basic types: knowledge, physical skills, and perception.

The aptitudes associated with developing understanding or knowledge are General, Verbal, and Numerical. Aptitudes associated with physical skills are Motor Coordination, Finger Dexterity, Manual Dexterity, and Eye-Hand-Foot Coordination. Aptitudes associated with perception are Spatial, Form Perception, Clerical Perception, and Color Discrimination.

The aptitude requirements of approximately 500 occupations had been established in standardizing the General Aptitude Test Battery (GATB), which tests for nine of the eleven aptitudes. Occupational analysts researched the GATB norms to determine the aptitude requirements of other occupations. Essentially, they compared the duties of the occupations which had already been evaluated to the duties of other occupations. Aptitudes were one of the bases used to form the homogeneous clusters of occupations which comprise the Worker Trait Groups.

In any occupation, only some aptitudes are significant for job performance. The amount of these significant aptitudes required for average, satisfactory job performance is expressed in levels. These levels reflect the proportion of the working population which possesses the aptitude at that level. The following statements define the five aptitude levels.

Level 1. The top ten percent of the population: a very high degree of aptitude.

Level 2. The highest third of the population, excluding the highest ten percent: a high degree of aptitude.

Level 3. The middle third of the population: and average degree of aptitude.

Level 4. The lowest third of the population, excluding the lowest ten percent: a below average or low degree of aptitude.

Level 5. The lowest ten percent of the population: a very low degree of aptitude.

It would not be appropriate for students to assess themselves in relation to the working population. Since aptitude levels are affected by experience with the associated tasks, students can expect their aptitude levels to rise as they gain experience prior to entering the job market. So, in assessing their aptitude levels, students should compare themselves with others their own age. Further, since people tend to like to do things they do well, students should be encouraged to use aptitudes not only to judge whether they can learn to do job tasks, but also as a means of identifying alternatives to explore.

The Appalachia Educational Laboratory has developed clues or benchmarks to assist students in estimating their own aptitudes. The results of using this procedure have been found to correlate with GATB scores. The procedure has the advantage of giving the student a greater awareness and control over the assessment process.

To help you emphasize the **internal** assessment approach of the CIS access materials, use the four phases of learning to present the **Work Situations Checklist** in the following way:

Phase 1 — students develop an **understanding** of the concept through a general introduction, a filmstrip, and definitions of the aptitudes.

Phase 2 — students **personalize** the concept through a second filmstrip and discussion relating their own experiences to each type of aptitude.

Phase 3 — students **assess** themselves in relation to the aptitudes by estimating their own aptitude levels.

Phase 4 — students **apply** the concept by identifying Worker Trait Groups for which they meet or exceed the aptitude requirements. Subsequent exploration of occupations in these groups allows them to refine their estimates. Thus, their career exploration is an interactive process of self and occupational exploration.

PRESENTATION

Your role as leader is one of organizing the sessions, motivating the students, and facilitating the learning process. Learning is the responsibility of the learner. Students must be allowed and encouraged to assume this responsibility and apply the learning process to their career exploration and decision-making.

Equipment and Materials

Leaders will need:

- **Aptitudes Checklist**
- Filmstrip projector and cassette tape player
- FS/CASS "What Are Aptitudes?"
- FS/CASS "Learning About Your Aptitudes"

Students will need:

- **Aptitudes Checklist** (1 per student)
- **Career Information System Guide** (1 per student)
- **Worker Trait Group Guide** (10 per class)

Time

Presentation of the checklist requires approximately four 50-minute class sessions. If you do not have this much time, some activities may be assigned for completion between sessions. This time allotment assumes that students have been oriented to the **Career Information System.** If not, an additional introductory session should be scheduled to present the "Touring the Career Information System" section of the **Career Information System Guide.**

Overview

The overview shows the suggested presentation of the activities by class sessions.

SESSION	ACTIVITIES	OPTIONS
One	• introduction • filmstrip and discussion	
Two	• aptitude descriptions • filmstrip and discussion • relating personal experiences to aptitudes	
Three	• estimating aptitude levels	• GATB
Four	• identifying Worker Trait Groups for which students meet or exceed the requirements • exploring Worker Trait Groups in the **Worker Trait Group Guide**	 • group exploration

SESSIONS

Familiarize yourself with the information in this section before pesenting the activities to students. As you review this section, think of learning objectives you may wish to integrate.

Session One

Discuss the introductory paragraph of the **Aptitudes Checklist** with the students, then show the filmstrip "What are Aptitudes?"

The filmstrip should help students develop an understanding of (a) aptitude as the quickness or ease with which a person can learn to do something, and (b) the ways in which they can identify their own aptitudes.

After the filmstrip presentation, use the preceding student objectives and the following questions and comments to guide the discussion.

1. **Explain the meanings of achievement, ability, and aptitude.**
   COMMENT: Help the students define these three words. Achievement is what you have done. Ability is what you can do. Aptitude is what you can learn to do. These words describe the past, present, and future of the same personal characteristic.

2. **What kinds of aptitudes are needed to achieve in certain school subjects? What kinds of aptitudes are helpful in school activities such as clubs, sports, etc.?**
   COMMENT: Ask students to be specific in their responses. What evidences of aptitudes can you identify in your achievements (past)? What evidences can you identify through your abilities (present)? Students may need help in articulating what they can learn to do. Remind them that aptitudes are not confined to academic learning.

3. **How can you use the concept of aptitudes when selecting school subjects? Selecting recreational activities? Do you think there is a relationship between what you like to do and what you can do well? Explain your answer.**
   COMMENT: Most people seem to like to do what they can do well. Students are often motivated to learn what they think they can complete successfully.

4. **Could you have aptitudes of which you may be unaware? How might you learn about them? What school subjects or activities might help you identify your aptitudes in particular areas?**
   COMMENT: Individuals could have aptitudes related to fields in which they have no experience. For example, one might have aptitudes related to music, but be unaware of them because one has had little experience in music.

The primary focus of Session One should be on **understanding** the concept (the first learning phase). The filmstrip and discussion should be geared to meeting this learning objective.

Session Two

Ask students to read the brief aptitude descriptions in the **Aptitudes Checklist.** You may wish to direct students to discuss each description one at a time or discuss them all at the end. The purpose of the discussion is to help students relate their personal experiences to the eleven types of aptitudes. Examples of discussion questions that can be used to help students **personalize** the concept are:

1. What are some experiences you have had in which you used each of the eleven aptitudes?

2. Which experiences did you enjoy most?

3. Why did you enjoy them?

Try to bring out the ideas that we tend to enjoy doing things we do well, and that we often work to do well the things we enjoy. If your class is large, you may wish to break it into small discussion groups so that each student has an opportunity to participate. In this case, you should have a copy of the discussion questions for each group or write them on the chalkboard.

After students have discussed their experiences, show the filmstrip "Learning About Your Aptitudes." The filmstrip should help students (a) identify their own aptitudes by examining their achievements and present abilities and (b) become aware of the way they can use their aptitudes to explore occupations.

After the filmstrip presentation, use the following questions and comments to guide the discussion.

1. **Explain the advantages of using the aptitude categories defined by the U.S. Department of Labor to estimate your aptitudes instead of such expressions as "musical aptitude" or "drawing aptitude."**
   COMMENT: If you estimate your aptitudes in terms of the categories defined by the U.S. Department of Labor, you can relate your aptitudes to specific groups of occupations.

2. **Suppose you have a high level in a certain aptitude. Does this mean you will be successful in occupations involving that aptitude? Explain your answer.**
   COMMENT: Aptitudes must be used to develop abilities if they are to contribute to job performance. There are many factors other than aptitudes (interests, motivation, opportunities, values) that affect job performance.

3. **Suppose your estimate of a certain aptitude is lower than the significant aptitude level needed for an occupation. What should you do?**
   COMMENT: Interest and motivation may help the individual overcome difficulties in learning the required skills and knowledge.

The primary focus of Session Two should be on **personalizing** the concept (the second learning phase).

Session Three

Ask students to read and follow the directions given in Part II of the **Aptitudes Checklist.** Review the aptitude level definitions and the directions given for completing the Aptitude Self-Estimate Record with the students. Make sure students understand that the activity is **not** a test; rather, it is a means to help them assess their own aptitudes in order to relate them to Worker Trait Groups. Remind students to use the highest level possible suggested by the clues. The aptitude estimates are indicators of the ease with which students can develop abilities. However, they may be misleading. If a students has had a great deal of experience in performing certain tasks, the estimate might be too high. But if he or she has had little experience in an area, his or her estimate might be too low.

After students have recorded their estimated aptitudes, encourage them to express why they rated themselves at particular levels. Help students determine whether their estimates are based on limited or atypical experience.

Option: You may wish to have your students take the General Aptitude Test Battery (GATB) which is available through your State Employment Service. The test requires two and one half hours to take and must be administered by an individual certified by the Employment Service. It tests nine of the eleven aptitudes — all except Eye-Hand-Foot Coordination and Color Discrimination. Students will need to take the GATB in time to have their scores back by the fourth session. Do not give students their GATB scores until they have completed their Aptitude Self-Estimate Record. Then they should write the GATB levels **below** their estimated levels on the Aptitude Self-Estimate Record. Ask students to compare their tested and estimated levels. Where these levels differ, ask the students to review the test reaction record they completed after taking the GATB to see if anything in the test situation might have affected their performance. Then, ask the students to review the clues related to each level of aptitudes in the "Aptitudes" section of **Career Information System Guide** to be sure their estimate was properly made. If they feel the test did not adequately measure their aptitude, they should circle their estimated level. Students should use their tested and circled estimated levels to complete the activities of Session Four.

The primary focus of Session Three should be on helping students **assess** themselves in relation to the concept (the third learning phase).

Session Four

Ask students to read and follow the directions given in Part III of the **Aptitudes Checklist.** Review these directions carefully with the students. If possible, demonstrate how students should complete each step.

In this session, students identify the Worker Trait Groups for which their aptitudes meet or exceed the requirements (Steps A and B of the directions), and then they explore those Worker Trait Groups (Step C of the directions). When students have identified Worker Trait Groups they want to explore further, encourage them to explore at the occupational level, using the Career Information materials on their own. There should be copies of the **Career Information System Guide** and the **Worker Trait Group Guide** available in the career resource center or area where the occupational information is kept. Arrangements should be made so that students can continue using these materials outside of class.

If you are using other access variables such as work activities and work situations, you may wish to keep student exploration at the Worker Trait Group level until you introduce the use of all the variables, and then have students explore at the occupational level.

Option: To encourage students to continue their career exploration, help them form groups interested in the same Worker Trait Groups or occupations. Some schools have career clubs already formed, or your students may wish to begin one. You might set up a special bulletin board on which students can list their interests and ask those with similar concerns to sign up.

The primary focus of Session Four should be on **applying** the concept (the fourth learning phase.)

Conclusion

At this point, students should have a thorough understanding of the aptitudes, and they should be able to use their estimates in career exploration. Further, they should be familiar with the four phases of the learning process (understanding, personalization, self-assessment, and application) as they use the concept of aptitudes for career exploration. Their ability to use the concept and understand the process will help them use aptitudes and other factors as guides in the lifelong process of career exploration. Although the concept of aptitudes stays the same, students' interests and the nature of work opportunities will change. Therefore, the students need to continuously assess themselves in relation to the world of work.

SCHOOL SUBJECT-WORKER TRAIT GROUP CHART AND SCHOOL SUBJECT-OCCUPATION INDEX UTILIZATION GUIDE

INTRODUCTION

Course selection is one of the first opportunities students have for making career decisions. However, many students fail to see the relevance of their education and why they take certain subjects in school. Career exploration and preparation need to be related to high school course selection. Students' interests and abilities in certain subjects can be related to the knowledge and skills required of workers in certain occupations. This link, tying students' interests to potential career fields, is a critical element in the exploration and decision-making process.

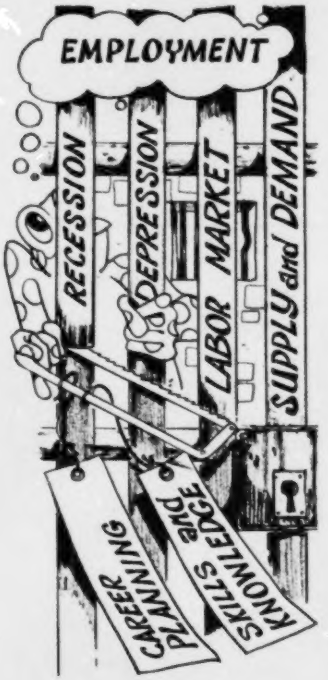
The Appalachia Educational Laboratory (AEL) has defined a linkage between school subjects and occupations based on the knowledge and skills common to each. Thus, students can explore occupations on the basis of their interests and abilities in school subjects. Further, they can use their occupational preferences to identify school subjects which offer the requisite knowledge and skills. This two-way process allows students to refine their understanding of occupations and school subjects. Thus, the linkage provides entry to a continuing process of deeper understanding of the students' own interests and abilities in relation to school and work. The continuing aspect of the process is critical, for just as students grow and change, the world of work and its opportunities change. As a result, students must be able to respond effectively to an altered self and world.

There are currently many lists of occupations related to school subjects or fields of study, developed by commercial publishers, unions, professional associations, and educators. However, these lists do not provide a comprehensive depiction of the relation of occupations to school subjects. The School Subject — Worker Trait Group Chart and the **School Subject — Occupation Index** have been designed to bridge the gap between occupational information and high school course opportunities.

AEL used the **Dictionary of Occupational Titles** (DOT), published by the U.S. Department of Labor, to systematically identify occupations related to the various school subjects. The DOT is based on a nation-wide pattern of job analysis and provides a complete list of the occuptions in the United States. Each occupation is defined in terms of its work tasks, tools, and technical knowledge which makes the linkage between occupations and subjects possible. Approximately 2,800 of the 12,000 occupations listed in the DOT were selected to form a base for the chart and index. The 1971 **Current Population Survey** of the U.S. Bureau of Census and the **Industry-Occupation Matrix** of the U.S. Bureau of Labor Statistics provided data that helped identify occupations with high employment rates. These occupations were selected along with others found in commercially published information. The important emerging occupations appearing in the Fourth Edition of the DOT were also selected. Thus, the occupations upon which the chart and index are based (1) include major employment opportunities, (2) lead to commonly used occuptional information, and (3) are representative of the total world of work.

The school subject titles and descriptions selected for use in the chart and index are derived from the standard taxonomy developed by the National Center For Educational Statistics, U.S. Office of Education.

This guide has two main sections. The first provides procedures for using the materials with the students. The second suggests ways to involve teachers and counselors in using the materials.



SECTION ONE

(Using the Materials With Students)

PRESENTATION

To help you emphasize the **internal** assessment approach of the CIS access materials, use the four phases of learning to present the School Subject — Worker Trait Group Chart and the **School Subject — Occupation Index:** (1) understanding the concept. (2) personalizing the concept, (3) assessing self in relation to the concept, and (4) applying the concept.

Your role as leader is one of organizing the sessions, motivating the students, and facilitating the learning process. Learning is the responsibility of the learner. Students must be allowed and encouraged to assume this responsibility and apply the learning process to their career exploration and decision-making.

Equipment and Materials

Leaders will need:

- **Aptitudes Checklist**
- Filmstrip projector and cassette tape player
- FS/CASS "Credentials and Competencies: Get Ready, Get, Set, Go!"
- School Subject — Worker Trait Group Chart (wall size)
- **School Subject — Occupation Index**

Students will need:

- **Career Information System Guide** (1 per student)
- **Worker Trait Group Guide** (10 per class)
- **School Subject — Occupation Index** (10 per class)
- Access to the **Career Information System.**

Time

Presentation of the chart and index requires approximately four class sessions. If you do not have this much time, some activities may be assigned for completion between sessions. In addition, the index contains complete directions to students for independent use of the materials. This time allotment assumes that students have been oriented to the **Career Information System.** If not, an additional introductory session should be scheduled to present the "Touring the Career Information System" section of the **Career Information System Guide.**

Overview

The overview shows the suggested presentation of the activities by class sessions.

SESSION	ACTIVITIES
One	• introduction • filmstrip and discussion • identifying competencies
Two	• assessing competencies and credentials • identifying preferred subjects
Three	• using the chart and index
Four	• exploring Worker Trait Groups and occupations.
Optional Sessions	• course selection and program planning • using the **Worker Trait Group Keysort Deck**

SESSIONS

Before presenting the activities, read the instructions to the student and the teacher in the **School Subject — Occupation Index,** to be sure you understand its purpose and functions. Then familiarize yourself with the information in this section. Relate the school subject titles used in the chart and the index to the titles used in your school, so you can help your students make the transition.

Session One

Ask students to briefly discuss (1) how school and work are related, and (2) how their interests and abilities relate to school and work. Try to bring out the interactive effect of interests and abilities and of school and work, as a lead-in to the filmstrip.

Show the filmstrip "Credentials and Competencies: Get Ready, Get Set, Go!" to introduce the concept of credentials and competencies as a link from school to work. The filmstrip should help students develop an understanding of (a) competency as what a person is able to do, (b) credential as representing what a person should be able to do, and (c) the ways competencies and credentials can be acquired and can affect obtaining and retaining a job.

After the filmstrip presentation, use the following questions and comments to guide the discussion.

1. **What kinds of credentials can a person acquire?**
   COMMENT: The filmstrip gave the following examples: birth certificate, passport, blue ribbon, credit card, diplomas, theater tickets, etc.

2. **How can credentials be acquired?**
   COMMENT: Taking a course, passing a test, winning a contest, paying a fee, etc.

3. **What credentials may be required by law?**
   COMMENT: When the public safety is involved. Ask students to give specific examples.

4. **Why would an employer be interested in your credentials?**
   COMMENT: To determine the best person available for the job.

5. **Will credentials help you keep a job once you get it? Why, or why not?**
   COMMENT: Credentials show what a person should be able to do; competencies are what a person can do. Competencies, not credentials, help you keep a job.

6. **Is school the only place where competencies can be developed? Why, or why not?**
   COMMENT: Each person has been acquiring certain competencies since birth. Therefore, competencies can be developed in many different places.

7. **What skills can you refine in school?**
   COMMENT: This might include communicating with others, getting along with others, solving problems, and thinking critically, as well as acquiring skills specific to subject matter.

Close the discussion with the idea that students can use their own interests and abilities in school subjects for career exploration.

Have students discuss the kinds of competencies and credentials their age group usually has. You may wish to list them on the chalkboard. After students have identified typical competencies and credentials, ask them to explain how such credentials and competencies are usually achieved (through school courses, work experience, volunteer work, hobbies, etc.). Then ask students to identify and list five to ten of their personal competencies. (This step may be given as an assignment between sessions. If so, be sure students bring the list to the next session.)

The primary focus of Session One should be on **understanding** and **personalizing** the concept (the first and second learning phases).

Session Two

Use the following example as a guide to develop and duplicate forms on which students are to record their credentials and competencies. You may wish to ask students to draw their own forms. In this case, draw a sample form on the chalkboard.

EXAMPLE

COMPETENCIES	SOURCES		RELATED CREDENTIALS
	School	Experience	
1. Making change	Math class	Cashiering	
2. Swimming	P.E.	Red Cross	Life Saving Certificate (WSI)
3. Driving car	Driver's Ed.	Practice at home	Driver's license

Ask students to list their competencies in the left column, using the competencies they identified in Session One. In the middle column, students are to indicate where and how they obtained the competency. In the right column, ask students to list any credentials related to the competencies. After students have completed their forms, ask them to list in order of preference the competencies which hold the most interest and value for them. Direct students to discuss and share their forms with others. Focus the discussion on the relation of competencies to interest and achievement in school subjects.

Next, ask students to identify and list their preferred school subjects. These may be subjects students like, in which they perform well, or subjects they want to explore. Direct students to rank the subjects according to the strength of their preference. In doing so, they should consider how much they like each subject, how well they perform in it, and how important it is for them to explore it. (Students will need this list in Session Three.)

Option: Students may share their competency and school subject preferences lists with friends, parents, or classmates who can help them confirm their interests and abilities or add new ones to the lists. This step should be completed between Sessions Two and Three.

The primary focus of Session Two should be on helping students **assess** their own competencies as they relate to school subjects (the third learning phase).

Session Three

Show students the wall-size School Subject — Worker Trait Group Chart, then direct them to the reduced chart contained in the **Career Information System Guide.** Review the list of subjects. The courses offered in your school may not have the same titles as those on the chart, so students may need help in recognizing their subjects on the chart. You may wish to use a highlighter to indicate which subjects listed are offered in your school. Review with the students the chart instructions in the **Career Information System Guide** and demonstrate how to find Worker Trait Groups related to school subjects.

Ask students to identify the Worker Trait Groups related to the school subject they ranked as first in Session Two. They should write down the chart's subject title and number, then list the titles and numbers of all the Worker Trait Groups which have been coded "A" in the subject's row.

Show students how to use the chart to find subjects related to Worker Trait Groups. If the students have used other CIS access materials, such as the **Work Activities Checklist,** the **Work Situations Checklist,** or the **Aptitudes Checklist,** they may wish to select a Worker Trait Group they have already identified for further exploration.

Review the instructions given on the use of the **School Subject — Occupation Index** with the students in the **Career Information System Guide.** (These instructions also appear in the front of the index.) Demonstrate the use of the index to the students by identifying Worker Trait Groups and occupations related to a few selected school subjects.

Once students are familiar with the use of the chart and the index, direct them to identify and explore Worker Trait Groups and occupations related to their preferred school subjects independently. Students should use the **Worker Trait Group Guide** and the materials filed in the **Career Information System** to explore the Worker Trait Groups they identify. Encourage them to continue this individualized exploration outside of class. (The students' exploration will be continued in Session Four as a guided experience.)

The primary focus of Session Three should be on **applying** the concept (the fourth learning phase).

Session Four

Help students continue the individualized exploration they started in Session Three. As they read the descriptions of the Worker Trait Groups and occupations related to their preferred school subjects, they should be aware of the information concerning competencies and credentials. When they center their exploration on a Worker Trait Group and then on an occuption in that Worker Trait Group, they should list the related competencies and credentials. The following questions can help students identify the related competencies and credentials:

- What tasks must I be able to perform? (competencies)
- What evidence do I need to show employers that I should be able to perform these tasks? (credentials)

In addition, direct students to check the related school subjects in Part III of the **School Subject — Occupation Index** and to compare these courses with the competencies they have listed. At the end of the session, students should have their competency list completed and the related courses checked. Emphasize that they are not being asked to make an occupational choice but that they are learning the process of relating school subjects and preparation to career exploration.

The primary focus of Session Four should be on **applying** the concept (the fourth learning phase).

Optional Sessions

Additional sessions may be added to tie the use of the chart and index to schedule planning for the following year's courses or for tentative four-year program planning. In addition, the use of the **Worker Trait Group Keysort Deck** may be introduced. The deck has a "Preparation" section which relates the Worker Trait Groups to high school and post high school programs. Detailed instructions on the use of the **Worker Trait Group Keysort Deck** are located in the **Career Information System Guide.**

Conclusion

At this point, students should have a thorough understanding of school subjects as they relate to Worker Trait Groups and occupations within those groups. They should have acquired the competency to:

- understand the relation of school subjects to Worker Trait Groups and their associated occupations through credentials and competencies.
- describe the strength of the relation of school subjects to Worker Trait Groups or occupations.
- use their preferred school subjects to identify Worker Trait Groups or occupations to explore.
- identify the competencies and credentials associated with a Worker Trait Group or occupation.

They should be able to use these competencies in selecting current courses and in continuing their career exploration.

Additional student skills can be developed through the optional sessions. It is recommended that students include tentative high school course/program planning as well as post high school planning as part of their career exploration experiences.

SECTION TWO

(Involving School Staff)

The concept of career development as an ongoing process integrating all phases of work (occupational, educational, civic and community, and home and family) requires that it be integrated throughout the school. To integrate career development experiences throughout the curriculum requires a commitment of time and effort. A major task in achieving this integration is involving the professional staff of the school. The difficulty of integration is increased by working with a staff whose major concerns lie in specialized areas of instruction. In order to justify a career development orientation, staff should be shown its utility in increasing students' ability and motivation to master course work.

It is important to emphasize to teachers that their involvement is part of a much broader sequence of career development activities. They need to be oriented to the school's career guidance program, including a specific orientation to the **Career Information System** (CIS). Understanding the experiences provided to students for developing career exploration and decision-making skills will put classroom contributions into context. The section entitled "Touring the Career Information System" in the **Career Information System Guide** may be modified for the teachers' orientation.

The School Subject — Worker Trait Group Chart and the **School Subject — Occupation Index** have a specific relation to the teacher's career guidance role and function. With careful planning, teacher's interest can be developed into active participation.

The following are examples of techniques for involving teachers in the utilization of the chart and index. Each of these techniques addresses two goals: to help teachers make their own instructional area more meaningful to students through its relation to the knowledge and skills required in the world of work; and to help teachers see their area of specialization as part of a much larger integrated system relating to the career development needs of youth.

1. A brief CIS orientation session should be provided to faculty prior to or as part of their introduction to the chart and index. This orientation should then be included in the in-service programs for new teachers.
2. Work with department chairpersons. Since they are responsible for coordinating departmental development and in-service programs, they can assist in providing a unified approach to the integration of career development concepts into the curriculum. This approach can also help alleviate duplication of experiences for students taking several courses within a specialized area.
3. Schedule a few minutes on the agenda of a faculty meeting to generate interest in the chart and index. Discuss the direct and indirect relation of the teachers' subjects to a range of occupations. Then show them the chart and index. This approach focuses attention on the need for such materials before they are introduced.
4. Offer individual assistance to teachers interested in using the CIS materials. Career exploration can be integrated with course skill development activities. For example, students learning to write a research report could use the CIS materials as research tools. Teachers

could use the chart and index to advise students interested in a subject area.

5. Ask one or two interested teachers to help you demonstrate to their students how the chart and index can be used to integrate career concepts and activities with subject content. This concentrated effort can develop into a successful example which could later be replicated in other classrooms.

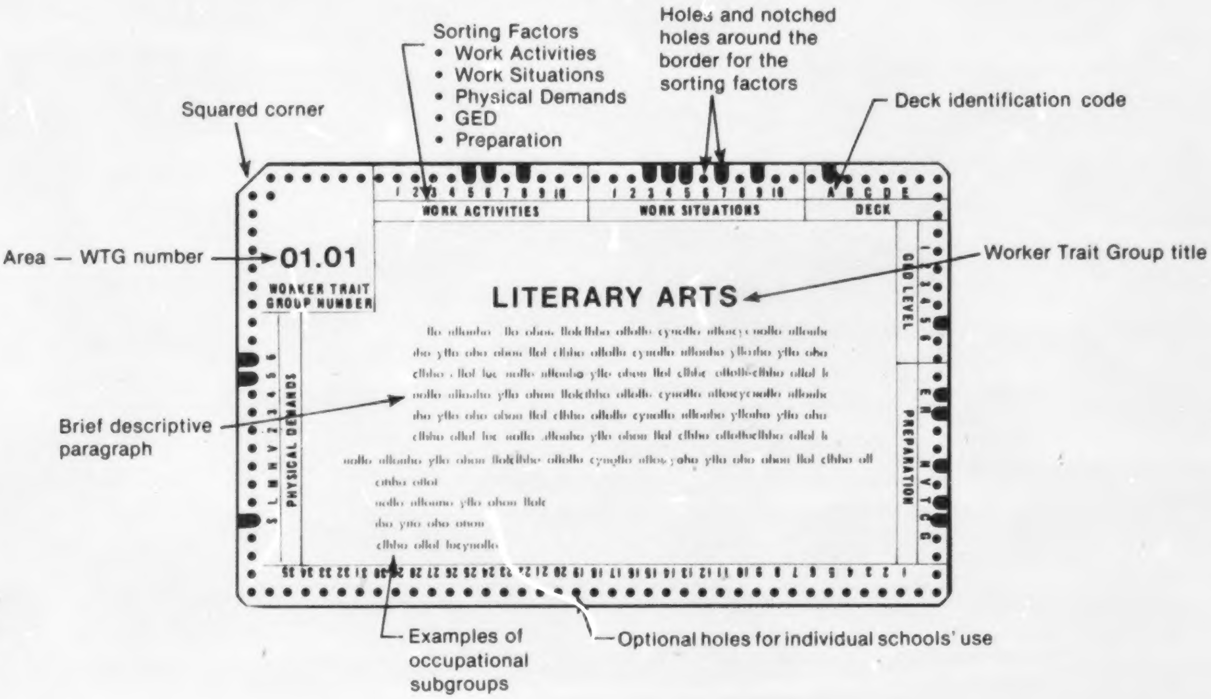
6. Use the index to identify field trip sites and resource speakers for classroom teachers. Help the teachers plan the field trips, schedule the use of resource persons, and identify career development goals which complement course goals for each planned activity. Pre and post discussions should be planned to maximize the experience.

The preceding techniques may also be used to introduce and implement other CIS materials within the classroom.

WORKER TRAIT GROUP KEYSORT DECK UTILIZATION GUIDE

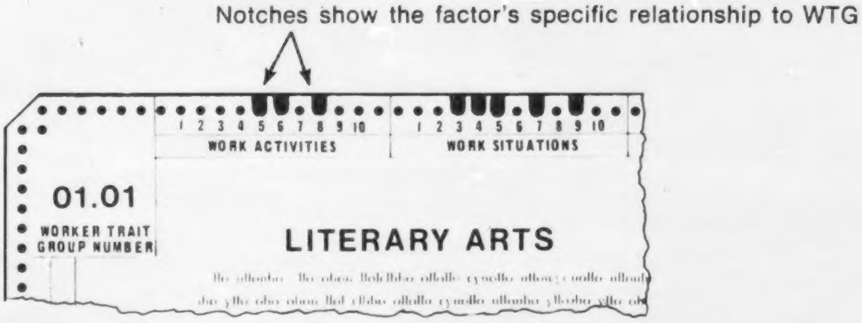
The **Worker Trait Group Keysort Deck** may be used to identify Worker Trait Groups related to the students' interests, abilities, and other personal characteristics. Students sort the cards on the basis of these characteristics, using the following sorting factors: Work Activities, Work Situations, General Educational Development (GED), Preparation, and Physical Demands. The title, the number, and a brief description of the Worker Trait Group are printed on each card as well as a listing of occupational subgroup examples.

KEYSORT CARD ILLUSTRATION



Sorting Factors
• Work Activities
• Work Situations
• Physical Demands
• GED
• Preparation
Holes and notched holes around the border for the sorting factors
Squared corner
Deck identification code
Area — WTG number
01.01
WORKER TRAIT GROUP NUMBER
WORK ACTIVITIES
WORK SITUATIONS
DECK
A B C D E
Worker Trait Group title
LITERARY ARTS
GED LEVEL
PREPARATION
PHYSICAL DEMANDS
Brief descriptive paragraph
Examples of occupational subgroups
Optional holes for individual schools' use

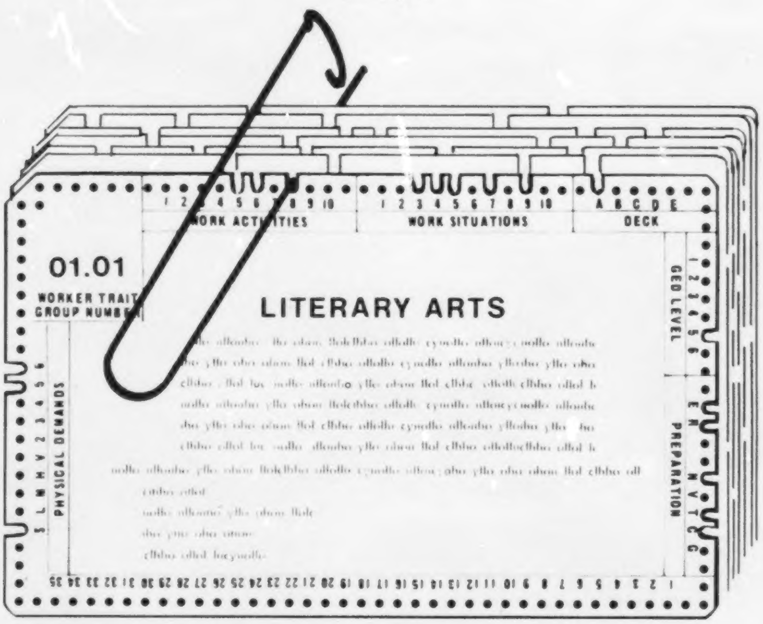
The sorting factors are printed around the edges of the cards. The card's edges also have a series of numbered holes which represent the different parts of the factors. Each of these factors has a specific relationship with the Worker Trait Groups. This relationship is shown by a notch or punch in the appropriate numbered hole. The following example shows how one factor — the types of Work Activities — relates to the Worker Trait Group "Literary Arts."



Notches show the factor's specific relationship to WTG
1 2 3 4 5 6 7 8 9 10
WORK ACTIVITIES
1 2 3 4 5 6 7 8 9 10
WORK SITUATIONS
01.01
WORKER TRAIT GROUP NUMBER
LITERARY ARTS

To identify the Worker Trait Groups related to a particular part of a factor, a special needle is used to sort the deck of cards. For example, to sort the deck for Work Activity No. 8, Creative Thinking, the sorting needle would be inserted in the hole No. 8 of the Work Activities section.

Example

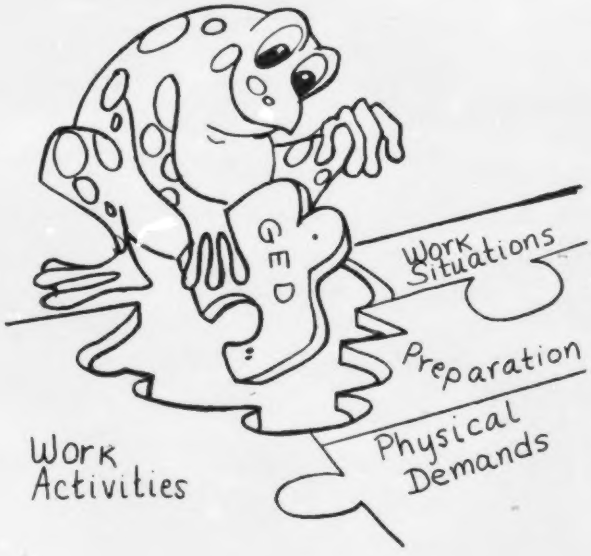

1 2 3 4 5 6 7 8 9 10
WORK ACTIVITIES
1 2 3 4 5 6 7 8 9 10
WORK SITUATIONS
A B C D E
DECK
01.01
WORKER TRAIT GROUP NUMBER
LITERARY ARTS
GED LEVEL
PREPARATION
PHYSICAL DEMANDS

The cards having the hole of Work Activity No. 8 punched will fall from the deck. These cards represent the Worker Trait Groups involving Creative Thinking. The deck may be sorted to identify Worker Trait Groups related to each factor part or may be sorted to combine several parts.

The basic sorting techniques and the different kinds of sorting logic are described in detail in the "Worker Trait Group Keysort Deck Instructions" section of the **Career Information System Guide**. You should review these instructions and become familiar with the use of the cards prior to student orientation.

It is suggested that students be instructed on the use of the cards in small groups. Each student will need a **Career Information System Guide** and a **Worker Trait Group Keysort Deck**. Once students know how to hold the cards and use the needle, help them follow the specific instructions for one of the sorting factors. You may wish to go through the instructions each time students are working with a new sorting factor, or students may follow them on their own, requesting help as needed.

You should note the optional holes on the bottom of the card. You may wish to relate the Worker Trait Groups to other clustering systems or information. Those optional holes provide you with the flexibility of linking other access variables and information to the deck.


GED
Work Situations
Preparation
Physical Demands
Work Activities